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Guidance for the Reregistration of Products Containing Simazine as the Active Ingredient

(U.S.) Environmental Protection Agency
Washington, DC. Office of Pesticide Programs

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GUIDANCE FOR THE REREGISTRATION OF
PRODUCTS CONTAINING
SIMAZINE
AS THE ACTIVE INGREDIENT

ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDE PROGRAMS
Washington, DC 20460

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INTRODUCTION

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA Section 3(g), as amended in 1978, directs EPA to reregister all pesticides as expeditiously as possible. Each registrant of a manufacturing use product of the active ingredient who wishes to continue to sell or distribute that product must apply for reregistration.

To fulfill this Congressional mandate, we have established the Registration Standards program which will review all pesticide active ingredients first registered before January 1, 1977. These pesticides will be reviewed in use clusters which are prioritized on the basis of a ranking scheme giving preference to pesticides used on food and feed crops.

The Registration Standards program involves a thorough review of the scientific data base underlying pesticide registrations and an identification of essential but missing studies which may not have been required when the product was initially registered or studies that are now considered insufficient. Our reassessment results in the development of a regulatory position, contained in this document, on each pesticide and its uses. The regulatory position may require the registrant to modify product labels to provide additional precautionary statements, restrict the use of the pesticide to certified applicators, provide reentry intervals, modify uses or formulation types, specify certain packaging limitations, or other requirements to assure that proper use of the pesticide poses no potential adverse effects to human health or the environment.

The scientific review, which is not contained herein but is available upon request, concentrates on the technical grade of the active ingredient and identifies missing generic data. However, during the review of these data we are also looking for potential hazards that may be associated with the formulated (end-use) products that contain the active ingredient. If we find serious concerns, we will bring formulated products under the provisions of the Registration Standards program to the extent necessary to protect the public.

EPA has the authority under FIFRA §3(c)(2)(B) to require that certain registrants submit generic data that will answer our questions regarding the hazard that may result from the intended use of the pesticide under review. Further, §3(c)(2)(B) provides that these data are to be submitted by those registrants who do not qualify for the formulator's exemption [FIFRA §3(c)(2)(D)]. Normally, this means that the registrants who are responsible for filling the data gaps are the manufacturing-use product producers (basic suppliers of the active ingredient). However, end-use producers will not qualify for the formulator's exemption if the source of their active ingredient: (1) is not registered with EPA, and/or (2) is produced by the registrant's firm, or a firm which has ownership in common with the registrant's firm. These end-use producers can qualify for the formulator's exemption if they change their source of supply to a registered source, provided the source does not share ownership in common with the registrant's firm. If the end-use product registrant decides to switch sources, a new Confidential Statement of Formula, EPA Form 8570-4, must be submitted to the appropriate Product Manager within 90 days of receipt of this Guidance Document. The chart on the following page shows what is generally required of those who do and do not qualify for the formulator's exemption in the Registration Standards program.

If you decide to request the Agency to discontinue the registration of any of your products subject to the reregistration requirements of this Guidance Document, please notify the Product Manager named in the cover letter, within 90 days from the receipt of this document, that you wish to voluntarily cancel the registration(s). If you decide to maintain your product registration(s), you must provide the information described in the following pages within the time-frames outlined. EPA will issue a notice of intent to cancel or suspend the registration of any currently registered product if you fail to comply with the requirements set forth in this Guidance Document.

This Guidance Document will be supplemented by EPA with additional information about compliance with data support requirements. In Monsanto v. Administrator, EPA was recently enjoined from implementing in any way the "mandatory data licensing" aspects of §3(c)(1)(D) of FIFRA. EPA is assessing the implications of the injunction for the reregistration process. Because this situation is currently unresolved, EPA has decided to proceed with the requirements in this Guidance Document which do not relate to compliance with the §3(c)(1)(D) provisions and to supplement the Document with additional guidance when circumstances permit. Failure to comply with the provisions of the subsequent guidance will also result in issuance by EPA of an intent to cancel the affected product registration(s).

Registrants are reminded that §6(a)(2) of FIFRA requires you at any time to submit factual information raising concerns of possible unreasonable adverse effects of a pesticide. You should notify the Agency of interim results of studies in progress if those results show possible adverse effects.

PRODUCTS SUBJECT TO THE REGISTRATION STANDARDS PROGRAM	ACTION(S) REQUIRED TO MAINTAIN REGISTRATION
I. Products That Do Not Qualify For The Formulator's Exemption	
A. Single Active Ingredient Products*	These products must be reregistered. To obtain reregistration, labeling, packaging and data requirements must be satisfied in accordance with the Registration Standards Guidance Document.
B. Multiple Active Ingredient Products	These products will not be reregistered at this time. However, generic data required to continue the registration of the active ingredient under review, as described in the Registration Standards Guidance Document, will be required and some labeling precautions may also be required.
II. Products That Do Qualify For The Formulator's Exemption	Only when additional restrictions or labeling are needed to protect man or the environment will these products be subject to the Registration Standard requirements. Affected products will be dealt with in a variety of ways, including but not limited to the Label Improvement Program and special intent to cancel notices.

* End-use products of registrants who also produce a manufacturing-use product will not be required to be reregistered provided that registrant fulfills the requirements specified in the Guidance Document for manufacturing-use product(s). Such end-use products will be subject to the labeling changes required for products in "II" above. If there are no manufacturing-use products registered by any company end-use products will be required to be reregistered.

NOTE: If all registrants in "I" above fail to meet the requirements in I-A and B above, then the registrants in "II" lose their right to qualify for the formulator's exemption and become subject to the requirements in I-A and B.

REGULATORY POSITION AND RATIONALE

A. INTRODUCTION

This chapter describes the regulatory position of the Environmental Protection Agency ("the Agency") on simazine based on an evaluation of all registered manufacturing use products (MUP's) containing simazine as the sole active ingredient. Future requests for registrations of substantially similar products will be covered by this standard. Dissimilar products will require amendments to the standard. This document provides the rationale for the Agency's position and the criteria for registration. It also discusses labeling requirements and tolerances that may also be pertinent for registered end-use formulations.

"Simazine" is the accepted common name for the compound, 2-Chloro-4,6-bis(ethylamino)-s-triazine recognized by the American National Standards Institute. Trade and other names used for simazine include: Algae-A-Way, Algaecide, Algidize, Algi-eater, Algi-gon, Amizine, Aquazine, Atomicide, Cekusan, Cimacide, Framed, Gesapun, Gesatop, Primatol S, Princep, Simadex, Simanex, and Sim-trol. The Chemical Abstracts Service (CAS) Registry number is 122-34-9. The Office of Pesticides Program's Internal Control Number (EPA Shaughnessy number) is 080807.

B. USE PROFILE

Simazine is a triazine compound in general use as a selective or nonselective herbicide and algaecide. It is registered for use on many agricultural, noncrop and aquatic sites. The major agricultural site is corn. Most simazine is used as a preplant or preemergence herbicide on no-till or minimum tillage corn. Almost all is applied in combination with other herbicides, primarily atrazine. Of the total domestic simazine marketed, approximately 36% is applied to corn, 25% to citrus (oranges, lemons, and grapefruit), deciduous fruit and nut crops (including apples, pears, peaches, cherries, almonds, walnuts and grapes), 20% to noncrop industrial areas, and 19% to aquatic sites.

Registered agricultural sites include corn, citrus, deciduous fruits and nuts, berries, vegetables, forage crops, and tree nurseries. Simazine is also used to control algae and aquatic weeds in swimming pools, fish and farm ponds, cooling towers, and aquaria. At higher rates, simazine provides vegetation control on noncropland such as industrial sites, highways, railroad rights-of-way and others. Corn, citrus, deciduous fruits and nuts, and noncrop industrial uses account for most of the simazine use in the U.S.

Simazine is applied to the soil and must be absorbed by plant roots and translocated to the growing tips to exert an herbicidal effect. In susceptible plant species, it acts by inhibiting photosynthesis. Simazine controls most seedling broadleaf and grassy weeds and at higher rates provides almost total vegetation control in noncrop areas.

Simazine is registered as a technical material at 95-99.9% active ingredient and as a manufacturing use product containing 80% simazine for formulation of end-use products.

C. REGULATORY POSITION

Based on a review and evaluation of the available data and other relevant information on simazine the Agency has made the following determinations:

1. Manufacturing-use pesticide products containing simazine as a sole active ingredient may be registered for sale, distribution, formulation and use in the United States, subject to the terms and conditions specified in this standard. Applicants having products not conforming to the standard must apply to amend the document so those products containing simazine may be registered and reregistered under this standard. Mixtures and end-use products containing simazine are not covered under this standard.

2. Available data do not show that any of the risk criteria listed in §162.11(a) of Title 40 of the U.S. Code of Federal Regulations have been met or exceeded for the uses of simazine specified in this standard.

3. The available toxicity data are insufficient to fully assess the long-term chronic effects or the oncogenic, teratogenic, and mutagenic potential of simazine. In most cases the nature of the simazine food metabolites have been adequately characterized. The fact that the two major chlorometabolites of simazine (G-28273 and G28279) in plants are a part of some existing tolerances indicate that these metabolites, in some cases, are of toxicological concern. All established tolerances for raw agricultural commodities are expressed in terms of the parent compound only, except bananas, fish and potable water. Since chlorometabolites of simazine are major plant residues, data pertaining to these residues are necessary to assess the toxic properties of simazine and its major metabolites and to determine the adequacy of the currently established tolerances for simazine residues. Our toxicology staff is extremely concerned with metabolites formed within mammalian species during metabolism studies. Since previous metabolism studies of simazine have not identified whatever metabolites occur in food animals, additional data are necessary. When additional studies are submitted, a complete risk assessment will be made and the tolerance base reevaluated on the submitted data.

4. Available data are insufficient to fully assess the environmental fate of simazine and the exposure of humans and other nontarget organisms to simazine. When additional data are submitted, a complete environmental exposure assessment will be made.

5. Simazine is not very toxic to nontarget insects, birds, or estuarine and marine organisms. The wildlife and aquatic organisms tables attached to this standard indicate the data requirements and data gaps. A full assessment will be made when the required data are submitted.

6. The available simazine product chemistry data are insufficient to totally assess the chemical's characteristics. The data gaps outlined in the product chemistry data tables are tests required to adequately support the registration of simazine products.

7. A food additive tolerance of 0.01 part per million (ppm) has been established for the combined residues of simazine and its metabolites, 2-amino-4-chloro-6-ethylamino-s-triazine and 2,4-diamino-6-chloro-s-triazine, in potable water when present as a result of application of the herbicide to growing aquatic weeds. This tolerance will be replaced with a designated level acceptable for drinking water when reevaluation of the chronic data base is complete. [Refer to 47 Federal Register 25746, June 15, 1982]. [Also refer to page 8 of this document regarding acceptable residue level of 0.03 ppm for combined residues of simazine and its metabolites for potable water.]

8. Certain residue chemistry data are required as outlined in the Residue Chemistry data tables. When the required studies are submitted, a full tolerance reassessment will be made.

9. Registrants must provide or agree to develop additional data, as specified in the tables attached to this standard, in order to maintain existing registrations or to permit new registrations.

10. Because of the potential of simazine to contaminate groundwater, the Agency has determined that all terrestrial uses of simazine should be classified for restricted use and appropriate labeling required.

D. REGULATORY RATIONALE

The Agency has determined the following:

1. The available data indicate that technical simazine is a moderate eye and dermal irritant (Toxicity Category III), and has low oral and dermal toxicities (Toxicity Category IV). There are no data available for inhalation toxicity and, therefore, a data gap exists for this requirement.

   A 21-day subacute dermal toxicity study (00057567) in rabbits at doses up to 1 g/kg produced no systemic toxicity nor any dose-related alterations of the skin. The findings of this study indicate a no-observed effect level of more than 1 g/kg.

   The two-year chronic rat feeding study showed no dose related pathological changes. Mortality was due primarily to respiratory infections with very few males in test and control groups surviving twice that of control females. Histopathologic evaluation was not provided for animals that died during the study. Chronic toxicity and oncogenic potential could not be determined in this study from the feeding of simazine to rats at dosages up to 100 ppm for 104 weeks and are considered to be data gaps for this requirement.

The two-year chronic dog feeding study showed no signs of toxicity from dosages of 15, 150 and 1,500 ppm, except net weight loss at 1,500 ppm and less weight gain at 150 ppm. Weight gain differences did not occur during the second half of the study. Ages of individual dogs used in the study and individual observation records were lacking. Chronic toxicity could not be determined from this study. A data gap exists for this requirement.

Oncogenicity Study: The available rat study does not fulfill oncogenicity requirements and a second species (mouse) has not been received for review.

Teratogenicity Study: No data are available for review. A data gap exists for this requirement in two (2) species.

Reproduction Study - 3 Generation: Simazine has no adverse effects on reproductive performance in rats at a dietary level of 100 ppm. The findings of this study indicate a no-observed effect level of more than 100 ppm.

Mutagencity studies are not available for review. Data gaps exist for the entire category of mutagenicity testing.

The available metabolism studies are inadequate; therefore, a data gap exists for a required general metabolism study in mammalian species.

2. The available avian studies show that simazine is practically non-toxic to birds and its uses are not expected to affect avian wildlife. However, an avian reproduction study on an upland gamebird species is required since simazine persists in soil and water, is readily taken up by plants and will persist on treated vegetation such as seed pods. The available data is sufficient to characterize the acute toxicity of technical simazine as slightly to moderately toxic to freshwater fish and practically non-toxic to aquatic invertebrates. An acute and chronic fish study on fathead minnows were conducted with Aquazine (80% a.i.). Therefore, these requirements are considered fulfilled for testing with a formulated product; however, a test with a coldwater species on an 80% a.i. test material is still required. Since simazine is persistent in water, simulated or actual field studies may be needed for products registered for direct application to water.

3. Available data are insufficient to fully assess the environmental fate of simazine and exposure of humans and other nontarget organisms to simazine. The following data are required to fully assess the environmental fate and transport of, and the potential exposure to simazine: (a) photodegradation studies on soil and in water; (b) aerobic soil metabolism; (c) anaerobic and aerobic aquatic metabolism; (d) leaching and adsorption/desorption; (e) terrestrial, aquatic, forestry and long-term field dissipation studies; (f) accumulation studies on rotational and irrigated crops.

4. The Agency has a concern about groundwater contamination by simazine. Data to more fully assess groundwater contamination will be required on an accelerated schedule. Because of groundwater concerns, the Agency has determined that all terrestrial uses of simazine should be classified for restricted use and appropriate labeling required.

5. Data to support the establishment of reentry protection standards are not required because the Agency has determined, based on the use patterns and available toxicity data for simazine, that the criteria in §158.140 are not met.

6. It is not the Agency's policy to cancel or to withhold registrations merely because data are missing or inadequate (See Sections 3(c)(2)(B) and 3(C)(7) of the FIFRA). Rather, publication of this standard provides a mechanism for identifying data needs for registration under the standard and allows for the upgrading of labels during the period in which the required data are being developed. These data will be reviewed and evaluated when they are received and the Agency will determine at that time whether they will affect the registration(s) of simazine.

E. CRITERIA FOR REGISTRATION UNDER THIS STANDARD

To be subject to this standard, products must meet the following conditions:

1. Contain simazine as the sole active ingredient and,
2. Conform to the acute toxicity limits, product composition, and use pattern requirements listed in Section F of this document.

The applicant for registration or reregistration of products subject to this standard must comply with all terms and conditions described in it, including commitments to fill data gaps on a schedule agreed to by both this Agency and the applicant. All applicants for registration under this standard must follow the instructions contained in this standard and complete and submit the appropriate forms within the time specified.

F. ACCEPTABLE RANGES AND LIMITS

1. Product Composition Standard

Technical grade products must contain at least 95 percent simazine as the sole active ingredient. Each manufacturing-use product formulation proposed for registration must be fully described with an appropriate certification of limits. In addition, the active ingredient content found in the manufacturing-use simazine products must be substantially similar to that in currently registered technical products. Any manufacturing-use product not meeting these requirements will be considered a new product and will not be registerable under this standard.

2. Acute Toxicity Limits

The Agency will consider registrations of technical grade and manufacturing-use products containing simazine within acute toxicity categories III and IV provided that the labeling of these products bears appropriate precautionary statements.

3. Use Patterns

To be registered under this standard, manufacturing-use products containing simazine may be labeled for formulation only into end-use products for herbicides used for the control of broadleaved and grassy weeds in alfalfa, almonds, apples, artichokes, asparagus, avocados, bananas, bermudagrass, blackberries, blueberries, boysenberries, cherries, corn (all types), cranberries, filberts, grapefruits, grapes, grasses, lemons, loganberries, macadamia nuts, olives, oranges, peaches, pears, pecans, plums, raspberries, strawberries, sugarcane, walnuts, forage crops, tree nurseries, christmas tree plantings, shelterbelts, tree plantations for timber, woody ornamentals, turfgrasses for sod, fairways, lawns and similar areas, swimming pools, farm ponds, cooling towers, aquaria, and nonselective weed control on noncropland such as industrial sites, highways, and railroad rights-of-way.

G. REQUIRED LABELING

All technical grade, manufacturing-use, and end-use products containing simazine must bear appropriate labeling as specified in 40 CFR 162.10. Other portions of the guidance package contain specific information regarding label requirements.

In addition to the requirements stated in 40 CFR 162.10, the following information must appear on the labeling:

1. The labeling must list specific, currently registered sites that the product is intended to be used on after manufacturing into an end-use product or the manufacturing-use product will be considered to be for manufacturing into end-use products for all registered use sites.

2. Products labeled for terrestrial use(s) must be classified for "RESTRICTED USE" and the labels must bear the following groundwater precautionary statements:

   > "Simazine is known to leach through soil and has been found in groundwater. Users are advised to apply this product only where groundwater contamination is unlikely. Do not apply in recharge areas of designated Sole Source Aquifers, or in areas with well-drained soils as defined by Class A of the Soil Conservation Service classification system which overlay shallow aquifers or which are not protected by an overlying impervious layer. Consult the proper state regulatory officials in your area for information on the location of sole source recharge areas, and the local agent of the Soil Conservation Service for information on your specific soil characteristics."

   The above label changes must be made by December 31, 1984.

3. The labeling must incorporate the following (appropriate) environmental precautionary statements:

   Manufacturing-Use

   > "Do not discharge into lakes, streams, ponds or public water unless in accordance with an NPDES* permit. For guidance contact your regional office of the Environmental Protection Agency."

   End-Use

   Non-Aquatic

   > "Do not apply directly to water or wetlands. Do not contaminate water by cleaning of equipment or disposal of wastes."

   Aquatic Uses

   > "Consult your State Fish and Game Agency before applying to public waters. Permits may be required before treating such waters. Do not apply directly to water except as directed on the labeling. Do not contaminate water by cleaning of equipment or disposal of wastes."

Cooling Towers

> "Do not discharge into lakes, streams, ponds or public water unless in accordance with an NPDES* permit. For guidance contact your regional office of the Environmental Protection Agency."

*NPDES = National Pollutant Discharge Elimination System

H. TOLERANCE REASSESSMENT

In the United States, tolerances are established for residues of simazine in or on the following raw agricultural commodities [40 CFR $180.213, 213a]:

15 ppm in Alfalfa, Alfalfa forage, Alfalfa hay, Bermuda grass, Bermuda grass forage, Bermuda grass hay, Grass, Grass forage, and Grass hay.

0.25 ppm in Almonds, Almond hulls, Apples, Avocados, Blackberries, Blueberries, Boysenberries, Cherries, Corn fodder, Corn forage, Corn (all), Corn grain, Cranberries, Currants, Dewberries, Filberts, Grapefruit, Grapes, Lemons, Loganberries, Macadamia nuts, Olives, Oranges, Peaches, Pears, Plums, Strawberries, Sugarcane, and Raspberries.

10 ppm in Asparagus.

12 ppm in Fish.

0.5 ppm in Artichokes.

0.2 ppm in Bananas and Walnuts

0.1 ppm in Pecans.

0.02 ppm in Cattle fat, Cattle meat byproducts (mbyp), eggs, Goat meat byproducts (mbyp), Goat meat, Hog fat, Hog meat byproducts (mbyp), hog meat, horse fat, horse meat byproducts (mbyp), Horse meat, Milk, Poultry fat, Poultry meat byproducts (mbyp), Poultry meat, Sheep fat, Sheep meat, Sheep meat byproducts (mbyp).

The existing tolerances for residues in or on bananas and fish are adequate both numerically and in terms of their expression (combined residues of simazine and its metabolites 2-chloro-4,6-diamino-s-triazine (G-28273) and 2-amino-4-chloro-6-ethyl-amino-s-triazine (G-28279). For potable water, an acceptable residue level of 0.03 ppm for combined residues of simazine and its metabolites G-28273 and G-28279 should be designated to achieve consistency with the detection limits of the method.

The remaining tolerances are set for residues of simazine per se; however, since the chlorometabolites of simazine may constitute a significant portion of the residues in or on plants and animals, these tolerances must be expressed in terms of simazine, G-28273 and G-28279. Following submission of the chlorometabolite data requested for representative crops, the numerical values of individual tolerances will be reevaluated.

The current theoretical maximum residue contribution (TMRC) figure for simazine residues in the human diet is 0.2890 mg/day (assuming a 1.5 kg diet). The effects on the TMRC of changing the tolerance expression for all commodities to include the above metabolites cannot be assessed until residue data including metabolites are submitted. No Acceptable Daily Intake (ADI) or Maximum Permissible Intake (MPI) figures have been established. Data are either lacking or insufficient to determine the above.

SIMAZINE*

TYPE PESTICIDE: Herbicide; Algaecide

FORMULATIONS: Tech (95%, 97%, 98%); FI (80%); G (0.167%, 0.25%, 0.63%, 0.75%, 1%, 1.5%, 2%, 4%, 8%, 10%, 11%, 12%); P/T (0.55%, 0.6%, 0.75%, 12%); WP (0.55%, 1.1%, 45%, 80%, 90%); Impr (5%); FlC (0.88 lb/gal, 4 lb/gal, 3%, 3.5%, 7.5%); SC/S (1%, 20%); SC/L (0.6%); RTU (0.1%, 1%)

GENERAL WARNINGS AND LIMITATIONS: A translocated herbicide used to control annual grasses and broadleaf weeds. May also be used as an algaecide. It should be applied before weeds emerge or following removal of weed growth. Irrigation or rainfall is necessary to move the chemical into the root zone of weeds. Very dry soil conditions and lack of rainfall following application may necessitate shallow cultivation. Reduce dosage in proportion to band area actually treated. Where a dosage range is given, use the lower dosage on coarse textured soil and soil low in organic matter; use the higher dosage on fine textured soil and soil high in organic matter.

Livestock Tolerances:
0.02 ppm in eggs and in the meat, fat and meat byproducts of cattle, goats, hogs, horses, poultry, and sheep.

TIME REQUIRED FOR CONTROL: Not located.

PHYTOTOXICITY TO TARGET WEEDS: Not located.

PHYTOTOXICITY TO CROPS: Not located.

MODE OF ACTION: Inhibits the Hill reaction of photosynthesis.

BROADLEAF WEEDS CONTROLLED:

@PBKBGAA	alyssum	
@PAFACAA	amaranth	
@PAAAAAB	annual broadleaf weeds	
@PBLAEBA	balsamapple	
@PDXABBD	broadleaf plantain	
@PAAAAAC	broadleaf weeds	
@PBVADBA	bullnettle	(a)
@PBFAWBG	bull thistle	(a)
@PCQBIAA	burclover	
@PBFAIAA	burdock	
@PBFAWBB	canada thistle	
@PADABBA	carpetweed	
@PAZAAAC	chickweed	
@PCQAAAB	clover	
@PAZAOBB	common chickweed	
@PBDAEBA	common lambsquarters	(b)

List continued on the next page.

*Princep
2-chloro-4,6-bis(ethylamino)-s-triazine

BROADLEAF WEEDS CONTROLLED (continued)

@PEDADBA	common purslane	
@PBFDHAA	dandelion	(c)
@PBFBIBB	dogfennel	
@PARABAA	fiddleneck	
@PBKBFBA	field pennycress	(c)
@PBZABAA	filaree	
@PDNABBA	fireweed	
@PBDADBA	fivehook bassia	
@PEMAEBB	florida pusley	
@PBFCXAA	groundsel	
@PCOAFBA	henbit	
@PAZAKBA	knawel	
@PBDAIBA	kochia	(c)
@PBDAEAB	lambsquarters	(b)(c)
@PBGAAAB	morningglory	
@PAZADBC	mouseear chickweed	
@PBKAAAC	mustard	
@PEWAIAA	nightshade	
@PBKBFAA	pennycress	(c)
@PBKAWAA	pepperweed	
@PAAAABI	pigweed	(c)
@PBFCKBB	pineappleweed	
@PDXABAA	plantain	
@PBFCEBF	prickly lettuce	
@PFMAFBB	puncturevine	(b)
@PAAAABP	purslane	
@PBFAEAA	ragweed	(b)
@PEDABBA	redmaids rockpurslane	
@PAFACBI	redroot pigweed	
@PBFBFBA	red tasselflower	
@PBDAKBA	russian thistle	(c)
@PBKAHBA	shepherdspurse	(c)
@PEAAGAD	smartweed	
@PBFDCAA	sowthistle	(a)
@PBFAOBA	spanishneedles	
@PEUAPAA	speedwell	
@PAAAABD	stinkweed	
@PAMAHBA	strangler vine	
@PBGAFBL	tall morningglory	
@PBKANBB	tansymustard	
@PBVAFBA	turkey mullein	(b)
@PDAABBB	velvetleaf	
@PAZAHBA	white cockle	(c)
@PBKAFBE	wild mustard	(c)
@PBKADAA	wintercress	(c)
@PBKAWBE	yellowflower pepperweed	
@PBKADBB	yellow rocket	(c)

(a) Hard-to-kill weeds.
(b) Use the lower dosage.
(c) Controls seedlings.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
=	**AGRICULTURAL CROPS**	
/2300100	Alfalfa	15 ppm (alfalfa, forage, hay) Do not graze for 30 days following application. Allow 60 days between application and cutting of hay. General Information: Use only in areas where frost occurs and alfalfa goes into a semi-dormant or dormant state. Alfalfa may be growing, semi-dormant or dormant when non-tank mix applications are made. Do not apply on snow. Liquid fertilizer may replace all or part of the water used as a carrier with the wettable powder formulations. Do not use liquid fertilizer when the crop is actively growing. Do not use on gravelly sand, loamy sand, soil low in organic matter or on highly calcareous or alkaline soil. Apply only once per year. Treated fields should not be rotated to any crop except corn the growing season following application.
	--	AZ state label Registration Number 010163-06399
$2300101 &080.0006 I9001500 &090.0006	0.80-1.60 (80% WP) 0.81-1.58 (90% WP)	Use limited to CO, IA, ID, KS, MI, MN, MT, ND, NE, NV, NY, OR, SD, UT, WA, WY and the CA counties of Del Norte, Siskiyou, Modoc, Shasta, Lassen, Plumas, Sierra and Nevada. Broadcast. Use on crops established for at least 1 year. Apply in the fall after the last cutting, prior to permanently frozen ground conditions. Apply in a minimum of 15 gallons of water per acre by ground, or in a minimum of 2.5 gallons by air.
I9001500 &080.0006 &090.0006	0.80-1.20 (80% WP) 0.81-1.17 (90% WP)	Use limited to CT, DE, IL, IN, KY, MA, MD, ME, MO, NH, NJ, OH, PA, RI, VA, VT and WV. Broadcast. Use on crops established for at least 1 year. Apply in the fall after the last cutting, prior to permanently frozen ground conditions. Apply in a minimum of 15 gallons of water per acre by ground, or in a minimum of 2.5 gallons by air.

GRASSES AND OTHER MONOCOTS CONTROLLED:

@PCACKBA	annual bluegrass	
@PCAAAAB	annual grasses	
@PCABHBB	barnyardgrass	(b)
@PCACKAA	bluegrass	
@PCAATBK	cheat	(b)
@PCABFAA	crabgrass	(b)
@PCAATBM	downy brome	
@PCACEBD	fall panicum	
@PCACUAA	foxtail	(b)(c)
@PCABIBA	goosegrass	
@PCAAAAA	grasses	
@PCABZBA	italian ryegrass	
@PCABHBA	junglerice	
@PCABBBA	orchardgrass	
@PCADJBA	purpletop	
@PCAACBA	quackgrass	
@PCABMBB	rattail fescue	
@PCAADBA	redtop	
@PCAARAA	signalgrass	
@PCAAEBA	silver hairgrass	
@PCAATBE	smooth brome	
@PCAAOBB	wild oat	
@PAAAABC	wiregrass	
@PCACEBC	witchgrass	
@PCACUBD	yellow foxtail	

(b) Use the lower dosage.
(c) Controls seedlings.

AQUATIC WEEDS CONTROLLED:

@PKAAAAA	algae	(d)
@PKAAAAF	green algae	
@PJBADAA	phormidium	(e)

(d) Use the lower dosage to prevent growth.
(e) Use the higher dosage.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Alfalfa (continued)	
I9001500 &080.0006 &090.0006	0.80 (80% WP) 0.81 (90% WP)	Use limited to the Northeastern United States. Broadcast. Use on crops established for less than 1 year. Alfalfa which has been seeded in the spring before June 1 and has become established can be treated in the fall after the last cutting, prior to permanently frozen ground conditions. Apply in a minimum of 15 gallons of water per acre by ground, or in a minimum of 2.5 gallons by air.
&000.1704 &000.2504	0.75-1.25 (0.167% G) (0.25% G)	Use limited to the Northeastern and North Central States. Broadcast. Use on crops established for at least 1 year. Apply in the fall, prior to permanently frozen ground conditions.
&000.1704 &000.2504	0.75-0.83 (0.167% G) (0.25% G)	Use limited to the Northeastern and North Central States. Broadcast. Use on crops established for less than 1 year. Alfalfa which has been seeded in the spring before June 1 and has become established can be treated in the fall, prior to permanently frozen ground conditions.
$2300115 &080.0006 I9900300 I9001500 &090.0006	0.80-1.60 (80% WP) 0.81-1.58 (90% WP)	Use limited to CO, ID, MT, NV, OR, UT, WY and the CA counties of Del Norte, Lassen, Modoc, Nevada, Plumas, Shasta, Sierra and Siskiyou. Dormant. Broadcast. Tank mix with paraquat dichloride. Apply to established alfalfa after the last fall cutting, when crop is dormant, and before spring growth begins. Do not apply if regrowth following the last fall cutting is more than 2 inches tall. Alfalfa foliage present will be burned. Apply in 20 to 100 gallons of water per acre by ground, or in 5 to 10 gallons by air.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/2802900	**Alfalfa-Orchardgrass Mixture**	15 ppm (alfalfa, forage, hay) 15 ppm (grass, forage, hay) Do not graze for 30 days following application. Allow 60 days between application and cutting for hay. General Information: Use only in areas where frost occurs and alfalfa goes into a semi-dormant or dormant state. Alfalfa must be dormant when applications are made. Do not apply on snow. Liquid fertilizer may replace all or part of the water used as a carrier with the wettable powder formulations. Do not use liquid fertilizer when the crop is actively growing. Do not use on gravelly sand, loamy sand, soil low in organic matter or on highly calcareous or alkaline soil. Apply only once per year. Treated fields should not be rotated to any crop except corn the growing season following application.
$2802915 &080.0006 I9001500	0.80 (80% WP)	Use limited to the Northeastern States. Dormant. Broadcast. Use on crops established for at least 1 year. Apply in the fall after crop has gone dormant. Apply in a minimum of 15 gallons of water per acre by ground, or in a minimum of 2.5 gallons by air.
&090.0006	0.81 (90% WP)	
&000.1704	0.75-0.84 (0.167% G)	Use limited to the Northeastern and North Central States. Dormant. Broadcast. Use on crops established for at least 1 year. Apply in the fall after crop has gone dormant.
&000.2504	0.75-0.81 (0.25% G)	
/0300100	**Almond**	0.25 ppm (almonds, hulls) General Information: Do not allow spray to contact fruit, foliage or stems. Apply to orchards established for at least 3 years. Make only 1 application per year. Do not use around mission variety propagated on plum rootstocks. Do not use on gravelly sand, loamy sand or on soil with less than 1 percent organic matter. Do not use where water will accumulate. Do not replant almonds or peaches in treated soil.
	--	CA state label Registration Number 000100-04283

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Almond (continued)	
$0300102 &080.0006 I9900300 &090.0006	1.00-2.00 (80% WP) 0.99-1.98 (90% WP)	Use limited to CA. Directed spray. Band application in the row. Apply a 2 to 4 foot band on each side of the tree row. Apply in 20 to 40 gallons of water per acre. Apply before weeds emerge in late fall or early winter. May be tank mixed with paraquat dichloride. Apply the tank mix in 50 to 200 gallons of water per acre.
/0400100	**Apple**	0.25 ppm General Information: Do not allow spray to contact fruit, foliage or stems. Apply to orchards established for at least 1 year. Make only 1 application per year.
	--	AZ state label Registration Number 010163-06399
$0400102 &090.0006 I9900300 &080.0006 &104.0014;	2.16-3.96 (90% WP) 2.00-4.00 (80% WP) (4 lb/gal F1C)	Directed spray. Broadcast or band. Apply in 20 to 40 gallons of water per acre. The wettable powder formulations may be tank mixed with paraquat dichloride.
 &004.0004	2.00-4.00 (4% G)	Directed application to orchard floor. Apply in the spring before weeds emerge.
/0400100	**Apple (non-bearing)**	N.F.
$0400116 &004.0004	6.00-8.00 (4% G)	Directed application to orchard floor. Apply in early spring during the dormant season. Apply around trees established for at least 1 year.
F &045.0006	3.15-3.43 (45% WP)	Directed spray. Broadcast or band. Apply in the spring after weeds emerge, but before fruit begins to form. Apply in 100 gallons of water per acre. Formulated with amitrole.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/1301800	Artichoke (Globe)	0.5 ppm
	--	AZ state label Registration Number 010163-06399
$1301802 &080.0006	2.00-4.00 (80% WP)	Directed spray. Apply after last fall tillage. Do not apply to sandy soil. Apply once a year.
&090.0006	1.98-3.96 (90% WP)	
/1600200	Asparagus	10 ppm
	--	AZ state label Registration Number 010163-06399
$1600202 &080.0006	2.00-4.00 (80% WP)	Directed spray. Apply once a year, either after discing in the spring before weeds emerge, or following harvest, after removal of existing weed growth. Spring application must be made at least 3 days before first cutting. Use only where asparagus has been established for 1 year. In OR and WA, do not use on sandy soils, and do not allow irrigation water to stand or form pools.
&090.0006	1.98-3.96 (90% WP)	
/2800000	Avocado	0.25 ppm General Information: Do not allow spray to contact fruit, foliage or stems. Apply around trees established for at least 1 year. Make only 1 application per year. Do not use on coarse or sandy soils.
	--	CA state label Registration Number 011656-05903
$2800002 &002.0004	4.00 (2% G)	Use limited to CA. Directed application to orchard floor. Apply after the orchard has been laid up in final form (late fall or early winter), prior to or immediately following weed seed germination, but prior to emergence. Avoid packing fruit for 10 days. Do not apply to trees that have been subjected to freezing within 1 year.
&080.0006	2.00-4.00 (80% WP)	Use limited to CA. Directed spray. Broadcast or band. Apply after final preparation of the orchard.
&090.0006	1.98-3.96 (90% WP)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/2201700	**Bermudagrass**	15 ppm (bermudagrass, forage, hay) Do not graze for 30 days after application of 0.8 to 2.4 pounds active ingredient per acre, or for 50 days after application of 3.15 pounds or more active ingredient per acre. Do not cut hay for 60 days after application of 0.8 to 2.4 pounds active ingredient per acre, or for more than 90 days after 3.15 pounds or more active ingredient per acre. General Information: Do not use in NM and the High Plains of TX.
	--	AZ state label Registration Number 010163-06399
$2201702 &080.0006	0.80-3.20 (80% WP)	Preemergence. Broadcast. Apply shortly after sprigging. Apply in a minimum of 15 gallons of water per acre.
&090.0006	0.81-3.15 (90% WP)	
$2201701 &080.0006 I9001500	0.80-3.20 (80% WP)	Postemergence. Broadcast. Apply from fall to spring depending on the weed problem, but before weed emergence. Apply in a minimum of 15 gallons of water per acre. For aerial application, use a minimum of 1 gallon of water for each 1 to 1.5 pounds of wettable powder. Do not apply within 7 days after cutting.
&090.0006	0.81-3.15 (90% WP)	
/0100200	**Blackberry**	0.25 ppm Do not apply when fruit is present. General Information: Do not allow spray to contact foliage or stems. Use one-half the dosage on plantings less than 6 months old. Apply the wettable powders in a minimum of 40 gallons of water per acre.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$0100202 &090.0006	1.98-3.96 (90% WP)	Directed application. Apply in the spring before buds break and weeds emerge.
&004.0004 &080.0006	2.00-4.00 (4% G) (80% WP)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Blackberry (continued)	
&080.0006	2.00 (80% WP)	Directed spray. Split application. Apply once in the spring and once in the fall.
&090.0006	1.98 (90% WP)	
&004.0004	3.92-4.00 (4% G)	Directed application. Quackgrass control. Apply once in the fall, or apply as a split application using one-half the dosage in the fall and one-half the dosage in the spring.
&080.0006	4.00 (80% WP)	
&090.0006	3.96 (90% WP)	
/0100900	Blueberry	0.25 ppm Do not apply when fruit is present. General Information: Do not allow spray to contact foliage or stems. Use one-half the dosage on plantings less than 6 months old.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$0100902 S0100202		Directed spray and directed application. Refer to Blackberry for use and limitation information.
/0100300	Boysenberry	0.25 ppm Do not apply when fruit is present. General Information: Do not allow spray to contact foliage or stems. Use one-half the dosage on plantings less than months old.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$0100302 S0100202		Directed spray and directed application. Refer to Blackberry for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/0500200	Cherry	0.25 ppm General Information: Do not allow spray to contact fruit, foliage or stems. Apply to orchards established for at least 1 year. Make only 1 application per year.
	--	AZ state label Registration Number 010163-06399
(	(sour)	
$0500202 &080.0006 I9900300	2.00-4.00 (80% WP)	Use limited to MI and WA. Directed spray. Apply in 20 to 40 gallons of water per acre. May be tank mixed with paraquat dichloride.
&090.0006	2.16-3.96 (90% WP)	
(	(sweet)	
$0500202 &080.0006	1.60-4.00 (80% WP)	Use limited to MO and states east of the Mississippi River (except TN). Directed spray. Apply in late fall to early spring prior to weed emergence. Apply in 20 to 40 gallons of water per acre. Do not apply to sandy soils.
&090.0006	1.58-3.96 (90% WP)	
/0500200	Cherry (non-bearing)	N.F. General Information: Do not allow spray to contact foliage or stems. Apply to orchards established for at least 1 year. Make only 1 application per year.
(	(sour)	
$0500216 &004.0004	6.00-8.00 (4% G)	Dormant. Directed application to orchard floor. Apply in early spring when trees are still dormant.

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	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/2800500	Corn	0.25 ppm (forage, fodder, grain and fresh corn, including sweet corn (kernels plus cob with husks removed)) General Information: Do not apply more than 4 pounds active ingredient per acre to corn in 1 year. Treated land should not be planted with any crop except corn until the following year. After harvest of a treated crop, plow and thoroughly till the soil in the fall or spring to minimize possible injury to spring seeded rotational crops. If more than 3 pounds active ingredient per acre is used, a crop of untreated corn should precede the next rotational crop. In the high plains and intermountain areas of the West (including central and western KS, western NB, western OK and the Panhandle of TX) where rainfall is sparse and erratic or where irrigation is required, use the product to control weeds in corn only when corn is to follow corn, or a crop of untreated corn is to precede another rotational crop. In western MN and eastern parts of ND, SD, NB and KS, do not plant soybeans following corn treated with more than 2 pounds active ingredient per acre. Do not plant sugar beets, tobacco, vegetables (including dry beans), spring seeded small grains, or small seeded legumes and grasses, the year after application. Liquid fertilizer may replace all or part of the water as a carrier. Do not use liquid fertilizers when making postemergence applications.
	--	AZ state label Registration Number 010163-06399
$2800502	2.97-3.96	Preplant. Broadcast. Quackgrass control. Apply in the fall. Plow 2 to 3 weeks later. If soil erosion is a problem, delay plowing until spring. Do not plant any crop except corn in the spring. Do not graze treated areas.
&090.0006	(90% WP)	
	3.00-4.00	
&080.0006	(80% WP)	
&104.0014	(4 lb/gal FlC)	
I9001500	1.98-3.96	Preplant or preemergence. Broadcast or band. Apply before, during or after planting, but before crop and weeds emerge. Apply in 10 to 40 gallons of water per acre after plowing; either before, during or after final seedbed preparation. Avoid deep incorporation. Broadcast applications may be aerially applied.
&090.0006	(90% WP)	
	2.00-4.00	
&080.0006	(80% WP)	
&104.0014	(4 lb/gal FlC)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Corn (continued)	
I9900300 &080.0006	1.00-1.44 (80% WP)	Preplant or preemergence. Broadcast or band. Tank mix with atrazine. Apply before, during or after planting, but before crop and weeds emerge. Apply in 10 to 40 gallons of water per acre after plowing, either before, during or after final seedbed preparation. Avoid deep incorporation.
&090.0006	1.00-1.46 (90% WP)	
&104.0014	1.00-1.50 (4 lb/gal FlC)	
$2800541 &080.0006 I9900300	2.00-3.00 (80% WP)	Preemergence. Broadcast. Tank mix with paraquat dichloride for use in no-till or minimum-till systems where corn is seeded directly into a cover crop, established sod, or previous crop residue. Apply in 20 to 60 gallons of water per acre before or after planting, but before corn emerges. Use with a surfactant.
&090.0006	1.98-2.97 (90% WP)	
/0101000	Cranberry	0.25 ppm General Information: Do not allow spray to contact foliage or stems. Apply to plots established for at least 1 year. Make only 1 application per year.
	--	CA state label Registration Number 005481-03858.
$0101002 &090.0006	1.98 (90% WP)	Directed application. Apply before spring growth begins, prior to weed emergence. Apply the wettable powders in 20 to 40 gallons of water per acre.
&004.0004 &080.0006	2.00 (4% G) (80% WP)	
&090.0006	1.98-3.96 (90% WP)	Use limited to MA. Directed application. Apply before spring growth begins, prior to weed emergence, or in the fall after harvest. Apply the wettable powders in 20 to 40 gallons of water per acre.
&004.0004 &080.0006	2.00-4.00 (4% G) (80% WP)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/0300500	Filbert	0.25 ppm General Information: Do not allow spray to contact fruit, foliage or stems. Apply to orchards established for at least 1 year. Do not use on gravel, sand or loamy sand soil. Do not apply when nuts are on the ground.
$0300502 &080.0006 I9900300	2.00-4.00 (80% WP)	Directed spray. Apply once in the fall, or make a split application using the lower dosage in the fall and again in the spring. Apply in 20 to 40 gallons of water per acre. May be tank mixed with paraquat dichloride.
&090.0006	1.98-3.96 (90% WP)	
/0200200	Grapefruit	0.25 ppm General Information: Do not allow spray to contact fruit, foliage or stems. Apply to orchards established for at least 1 year. Make only 1 application per year, except where split applications are recommended. For band applications or spot applications, reduce dosage in proportion to area actually treated. Do not use in nurseries. Do not apply around trees under stress from freeze damage for 1 year after freezing.
	--	CA state labels Registration Number 000100-04283 Registration Number 005481-03858 FL state label Registration Number 000100-04296
$0200202 &002.0004	4.00 (2% G)	Use limited to CA (except Palo Verde, Imperial and Coachella Valleys). Directed application to grove floor. Apply after the grove has been laid up in final form in late fall or early winter, prior to or immediately following weed seed germination, but prior to weed emergence. Do not use on coarse textured soils.
&090.0006	1.98-3.96 (90% WP)	Use limited to CA (except Palo Verde, Imperial and Coachella Valleys). Directed spray. Broadcast or band. Apply in 20 to 40 gallons of water per acre.
&080.0006 &104.0014	2.00-4.00 (80% WP) (4 lb/gal FlC)	
&004.0004	6.40-9.60 (4% G)	Use limited to FL. Directed application to grove floor. Apply in the sping (March or April), prior to weed emergence. Repeat annually.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Grapefruit (continued)	
&090.0006	6.39-9.54 (90% WP)	Use limited to FL. Directed spray. Broadcast or band. Apply in the spring. For milkweed vine control, use 8 to 9.6 pounds active ingredient per acre and apply prior to emergence, or before vines are 12 inches tall. Apply in 20 to 40 gallons of water per acre.
&080.0006	6.40-9.60 (80% WP)	
&104.0014	(4 lb/gal FlC)	
I9900300 &090.0006	3.15-3.20 (90% WP)	Use limited to FL (bedded areas). Directed spray. Broadcast or band. Tank mix with ametryn. For control of balsamapple vine, apply prior to emergence, or to vines up to 12 inches tall. Apply in a minimum of 40 gallons of water per acre.
&080.0006	3.20 (80% WP)	
&104.0014	(4 lb/gal FlC)	
I9900300 &080.0006	6.40-9.60 (80% WP)	Use limited to FL (ridge areas). Directed spray. Broadcast or band. Tank mix with paraquat dichloride. Apply in 50 to 200 gallons of water per acre in the spring.
&090.0006	6.39-9.54 (90% WP)	
I9900300 &090.0006	3.96 (90% WP)	Use limited to FL (ridge areas). Directed spray. Broadcast or band. Tank mix with ametryn. For control of milkweed vine, apply prior to emergence, or to vines up to 24 inches tall. Apply in a minimum of 40 gallons of water per acre.
&080.0006	4.00 (80% WP)	
&104.0014	(4 lb/gal FlC)	
&004.0004	4.00-5.00 (4% G)	Use limited to TX. Directed application to grove floor. Apply in the spring.
&080.0006	3.96-4.77 (80% WP)	Use limited to TX. Directed spray. Broadcast or band. Apply in 20 to 40 gallons of water per acre in the spring.
&090.0006	(90% WP)	
&104.0014	(4 lb/gal FlC)	
I9900300 &090.0006	3.15-3.96 (90% WP)	Use limited to TX. Directed spray. Broadcast or band. Tank mix with ametryn. Use the higher dosage for longer residual control. Apply in a minimum of 40 gallons of water per acre.
&080.0006	3.20-4.00 (80% WP)	
&104.0014	(4 lb/gal FlC)	

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	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/0101400	**Grapes**	0.25 ppm General Information: Do not allow spray to contact fruit, foliage or stems. Do not use in vineyards established for less than 3 years. Apply only once per year.
	--	AZ state label Registration Number 010163-06399
$0101402 &090.0006 I9900300	1.98-4.77 (90% WP)	Use limited to CA, MI and NY. Directed spray. Broadcast or band. Apply in 20 to 40 gallons of water per acre between harvest and early spring. The wettable powders may be tank mixed with paraquat dichloride.
&080.0006 &104.0015	2.00-4.80 (80% WP) (4 lb/gal SC/L)	
/0200400	**Lemon**	0.25 ppm General Information: Do not allow spray to contact fruit, foliage or stems. Apply to groves established for at least 1 year. Make only 1 application per year except where split applications are recommended. Do not use in nurseries. Do not apply to bedded fruit. Do not apply around trees under stress from freeze damage for 1 year after freezing.
	--	AZ state label Registration Number 010163-06399 CA state labels Registration Number 000100-04283 Registration Number 011656-05903 FL state label Registration Number 000100-04296
$0200402 &090.0006	1.58 (90% WP)	Use limited to AZ. Directed spray. Split application. Broadcast or band. Apply once in the spring and once in the fall. Apply in 20 to 40 gallons of water per acre.
&080.0006 &104.0014	1.60 (80% WP) (4 lb/gal FlC)	
&002.0004	4.00 (2% G)	Use limited to CA (except Palo Verde, Imperial and Coachella Valleys). Directed application to grove floor. Apply after the grove has been laid up in final form in late fall or early winter, prior to or immediately following weed seed germination, but prior to weed emergence. Do not use on coarse textured soils.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Lemon (continued)	
I9900300 &090.0006 &080.0006 &104.0014	1.98-3.96 (90% WP) 2.00-4.00 (80% WP) (4 lb/gal FlC)	Use limited to CA (except Palo Verde, Coachella or Imperial Valleys). Directed spray. Broadcast or band. Apply as a single application or as a split application using the lower dosage in the spring and again in the fall. Apply in 20 to 40 gallons of water per acre. The wettable powder formulations may be tank mixed with paraquat dichloride.
/0100500	**Loganberry**	0.25 ppm General Information: Do not allow spray to contact foliage or stems. Apply to plots established for at least 1 year. Make only 1 application per year.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$0100502 S0100202		Directed spray and directed application. Refer to Blackberry for use and limitation information.
/0300700	**Macadamia Nut**	0.25 ppm General Information: Do not allow spray to contact nuts, foliage or stems. Apply to orchards established for at least 1 year. Do not use on sand or gravelly soil.
	--	AZ state label Registration Number 010163-06399
$0300702 &080.0006 &090.0006	2.00-4.00 (80% WP) 1.98-3.96 (90% WP)	Directed spray. Broadcast or band. Apply before harvest and prior to weed emergence. Repeat as necessary. Apply in 50 gallons of water per acre. Do not apply when nuts are on the ground.
/0600900	**Olive**	0.25 ppm General Information: Do not allow spray to contact fruit, foliage or stems. Apply to groves established for at least 1 year. Make only 1 application per year.
	--	AZ state label Registration Number 010163-06399

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	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Olive (continued)	
$0600902	2.00-4.00	Directed spray. Broadcast or band. Apply following grove preparation in the fall. Repeat annually in midwinter. Apply in 20 to 40 gallons of water per acre.
&080.0006	(80% WP)	
	1.98-3.96	
&090.0006	(90% WP)	
/0200600	**Orange**	0.25 ppm General Information: Do not allow spray to contact fruit, foliage or stems. Apply to groves established for at least 1 year. Make only 1 application per year except where split applications are recommended. Do not use in nurseries. Do not apply around trees under stress from freeze damage for 1 year after freezing.
	--	AZ state label Registration Number 010163-06399 CA state labels Registration Number 000100-04283 Registration Number 005481-03858 Registration Number 011656-05903 FL state label Registration Number 000100-04296
$0200602	1.58	Use limited to AZ. Directed spray. Split application. Broadcast or band. Apply once in the spring and again in the fall. Apply in 20 to 40 gallons of water per acre.
&090.0006	(90% WP)	
	1.60	
&080.0006	(80% WP)	
&104.0014	(4 lb/gal FlC)	
	4.00	Use limited to CA (except Palo Verde, Imperial and Coachella Valleys). Directed application to grove floor. Apply after the grove has been laid up in final form in late fall or early winter, prior to or immediately following weed seed germination, but prior to weed emergence. Do not use on coarse textured soils.
&002.0004	(2% G)	
I9900300	1.98-3.96	Use limited to CA (except Palo Verde, Imperial and Coachella Valleys). Directed spray. Broadcast or band. Apply as a single application or as a split application, using the lower dosage in the spring and again in the fall. Apply in 20 to 40 gallons of water per acre. The wettable powder formulations may be tank mixed with paraquat dichloride.
&090.0006	(90% WP)	
	2.00-4.00	
&080.0006	(80% WP)	
&104.0014	(4 lb/gal FlC)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Orange (continued)	
&004.0004	6.40-9.60 (4% G)	Use limited to FL. Directed application to grove floor. Apply in the spring (March or April), prior to weed emergence. Repeat annually.
&090.0006	6.39-9.54 (90% WP)	Use limited to FL. Directed spray. Broadcast or band. Apply in the spring. For milkweed vine control, use 8 to 9.6 pounds active ingredient per acre and apply prior to emergence, or before vines are 12 inches tall. Apply in 20 to 40 gallons of water per acre.
&080.0006 &104.0014	6.40-9.60 (80% WP) (4 lb/gal FlC)	
I9900300 &090.0006	3.15 (90% WP)	Use limited to FL (bedded areas). Directed spray. Broadcast or band. Tank mix with ametryn. For control of balsamapple vine, apply prior to emergence, or to vines up to 12 inches tall. Apply in a minimum of 40 gallons of water per acre.
&080.0006 &104.0014	3.20 (80% WP) (4 lb/gal FlC)	
I9900300 &080.0006	3.20 (80% WP)	Use limited to FL (bedded areas). Directed spray. Broadcast or band. Tank mix with paraquat dichloride. Apply in 50 to 200 gallons of water per acre in the spring.
&090.0006	3.15 (90% WP)	
I9900300 &090.0006	3.96 (90% WP)	Use limited to FL (ridge areas). Directed spray. Broadcast or band. Tank mix with ametryn. For control of milkweed vine, apply prior to emergence, or to vines up to 24 inches tall. Apply in a minimum of 40 gallons of water per acre.
&080.0006 &104.0014	4.00 (80% WP) (4 lb/gal FlC)	
I9900300 &080.0006	6.40-9.60 (80% WP)	Use limited to FL (ridge areas). Directed spray. Broadcast or band. Tank mix with paraquat dichloride. Apply in 50 to 200 gallons of water per acre in the spring.
&090.0006	6.39-9.54 (90% WP)	
&004.0004	4.00-5.00 (4% G)	Use limited to TX. Directed application to grove floor. Apply in the spring.
&090.0006	3.96-4.77 (90% WP)	Use limited to TX. Directed spray. Broadcast or band. Apply in 20 to 40 gallons of water per acre in the spring.
&080.0006 &104.0014	4.00-8.00 (80% WP) (4 lb/gal FlC)	

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	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Orange (continued)	
I9900300 &090.0006	3.15-3.96 (90% WP)	Use limited to TX. Directed spray. Broadcast or band. Tank mix with ametryn. Use the higher dosage for longer residual control. Apply in a minimum of 40 gallons of water per acre.
&080.0006 &104.0014	3.20-4.00 (80% WP) (4 lb/gal FlC)	
/2202800	Orchardgrass (seed crop)	N.F. Do not graze treated areas for 30 days following application. Do not cut hay for 60 days following application.
$2202804 &080.0006	2.00 (80% WP)	Use limited to the Pacific Northwest. Postemergence. Broadcast. Apply in the fall as soon as fall rains begin. Apply in a minimum of 15 gallons of water per acre. Use only on grasses from which at least 1 seed crop has been cut.
&090.0006	1.98 (90% WP)	
/0500400	Peach	0.25 ppm General Information: Do not allow spray to contact fruit, foliage or stems. Apply to orchards established for at least 3 years. Make only 1 application per year. Do not replant peaches or almonds in treated soil.
	—	CA state label Registration Number 000100-04283
$0500402 &080.0006 I9900300	1.00-2.00 (80% WP)	Use limited to CA. Directed spray. Band application. Apply a 2 to 4 foot band on each side of the tree row before weeds emerge in late fall or early winter. Apply in 20 to 40 gallons of water per acre. May be tank mixed with paraquat dichloride. Apply the tank mix in 50 to 200 gallons of water per acre.
&090.0006	0.99-1.98 (90% WP)	
I9900300 &080.0006	1.60-4.00 (80% WP)	Use limited to AK, LA, MO, OK, TX and states east of the Mississippi River. Directed spray. Broadcast or band. Tank mix with paraquat dichloride. Apply in 50 to 200 gallons of water per acre. Do not use on sand or gravelly soils.
&090.0006	1.58-3.96 (90% WP)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/0500400	Peach (non-bearing)	N.F.
$0500416 &004.0004	6.00-8.00 (4% G)	Directed application to orchard floor. Apply in February or March, when trees are still dormant. Apply around trees established for at least 1 year.
/0400300	Pear	0.25 ppm General Information: Do not allow spray to contact fruit, foliage or stems. Apply to orchards established for at least 1 year. Make only 1 application per year.
	--	AZ state label Registration Number 010163-06399
$0400302 &080.0006 I9900300 &090.0006	2.00-4.00 (80% WP) 1.98-3.96 (90% WP)	Directed spray. Broadcast or band. Apply in 20 to 40 gallons of water per acre. Do not apply to sandy soils. May be tank mixed with paraquat dichloride. Apply the tank mix in 50 to 200 gallons of water per acre.
/0400300	Pear (non-bearing)	N.F.
$0400316 &004.0004	6.00-8.00 (4% G)	Directed application to orchard floor. Apply in February or March, when trees are still dormant. Apply around trees established for at least 1 year.
/0300800	Pecan	0.1 ppm General Information: Do not allow spray to contact fruit, foliage or stems. Apply to orchards established for at least 2 years. Make only 1 application per year. Do not use on sand or loamy sand. Do not apply when nuts are on the ground.
$0300802 &080.0006 I9900300 &090.0006	2.00-4.00 (80% WP) 1.98-3.96 (90% WP)	Directed spray. Broadcast or band. Apply before weeds emerge in the spring. Apply in 20 to 40 gallons of water per acre. Do not use west of the Pecos River in TX or NM. May be tank mixed with paraquat dichloride.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/2203500	Perennial Ryegrass (seed crop)	N.F. Do not graze treated areas for 30 days following application. Do not cut hay for 60 days following application.
$2203504 S2202804		Use limited to the Pacific Northwest. Postemergence. Refer to Orchardgrass (seed crop) for use and limitation information.
/0500500	Plum	0.25 ppm General Information: Do not allow spray to contact fruit, foliage or stems. Apply to orchards established for at least 1 year. Make only 1 application per year.
$0500502 &080.0006 I9900300 &090.0006	1.60-4.00 (80% WP) 1.58-3.96 (90% WP)	Use limited to MO and states east of the Mississippi River (except TN). Directed spray. Broadcast or band. Apply in late fall to early spring, prior to weed emergence. Do not apply to sandy soils. May be tank mixed with paraquat dichloride. Apply the tank mix in 50 to 200 gallons of water per acre.
/0100600	Raspberry	0.25 ppm General Information: Do not allow spray to contact fruit, foliage or stems. Make only 1 application per year except where split applications are recommended.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$0100602 S0100202		Directed spray and directed application. Refer to Blackberry for use and limitation information.
/0101600	Strawberry	0.25 ppm
$0101615 &090.0006	0.99 (90% WP)	Use limited to OR and WA. Postharvest. Broadcast. Apply from early October through November where overhead irrigation is not available. Apply after harvest at the time of bed renovation when overhead irrigation is available. Limit overhead irrigation to 0.5 inch immediately after application. Do not apply within 4 months after transplanting. Make only 1 application per growing season. Do not use on sandy soils.

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	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/2500300	Sugarcane	0.25 ppm Do not graze treated areas.
	--	AZ state label Registration Number 010163-06399
$2500302 &080.0006	2.00-4.00 (80% WP)	Preemergence. Broadcast. Apply at planting or after harvest if ratoon crop is to be grown, but before weeds or sugarcane emerge.
&090.0006	1.98-3.96 (90% WP)	
$2500301 &080.0006	2.00-4.00 (80% WP)	Postemergence. Broadcast or band. Use to provide continuing control of germinating weeds. Do not make more than 1 broadcast application over the crop. Do not make more than 2 interline directed applications. Do not apply after close-in. Total application should not exceed 10 pounds active ingredient per acre per crop cycle.
&090.0006	1.98-3.96 (90% WP)	
/2204300	Tall Fescue (seed crop)	N.F. Do not graze treated areas for 30 days following application. Do not cut hay for 60 days following application.
$2204304 S2202804		Use limited to the Pacific Northwest. Postemergence. Refer to Orchardgrass (seed crop) for use and limitation information.
/0300900	Walnut	0.25 ppm General Information: Do not allow spray to contact nuts, foliage or stems. Apply around trees established for at least 1 year. Make only 1 application per year. Leveling and furrowing operations after application will reduce effectiveness. Do not apply to sandy soil. Do not apply when nuts are on the ground.
	--	AZ state label Registration Number 010163-06399
$0300902 &080.0006	2.00-4.00 (80% WP)	Directed spray. Broadcast or band. Apply in 20 to 40 gallons of water per acre.
&090.0006	1.98-3.96 (90% WP)	

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	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Walnut (continued)	
I9900300 &080.0006	2.00-4.00 (80% WP)	Use limited to CA. Directed spray. Broadcast or band. Tank mix with paraquat dichloride.
&090.0006	1.98-3.96 (90% WP)	

= AGRICULTURAL PREMISES

General Warnings and Limitations: Do not use on land to be cropped, near desirable plants or in greenhouses.

/6600000	Uncultivated Agricultural Areas	N.F. General Information: Uncultivated agricultural areas include areas around buildings, silos, barns, equipment and fuel storage areas, fencerows, roadsides, and lanes. Use the higher dosages for perennial weed control, for longer residual control, and in areas with high rainfall or a long growing season.
 F	--	AZ state labels Registration Number 010163-06399 Registration Number 038059-09682 Formulated with sodium metaborate, sodium chlorate, and prometone. CA state labels Registration Number 005481-03858 Registration Number 006973-04607
$6600002 &004.0004 I9900300 I9001500 &090.0006 &080.0006 &104.0014	10.00-40.00 (4% G) 4.77-39.66 (90% WP) 4.80-40.00 (80% WP) (4 lb/gal FlC)	Broadcast. Apply before weed emergence or following weed removal. Apply the wettable powder and flowable concentrates in a minimum of 1 gallon of water per 0.8 pound active ingredient. If weed growth has begun prior to application and removal is not possible, tank mix with a contact or translocated herbicide. Aerial applications may be made where practical.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Uncultivated Agricultural Areas (continued)	
F &010.0004	15.00-22.50 (10% G)	Broadcast. Apply just before or after weed growth begins, usually in the spring or early summer. Cut and remove tall weeds 2 weeks before application. Apply the wettable powder in 100 gallons of water per acre. Formulated with amitrole; karbutilate; or sodium metaborate, sodium chlorate, and prometone.
&000.7505	1.63-6.53 (0.75% P/T)	
&045.0006	9.00 (45% WP)	
	ORNAMENTALS	
/3514100	**American Beech**	N.F.
$3514102 &045.0006 F	3.15 (45% WP)	Directed spray. Treat plants that have been established for at least 1 year. Apply in the spring or early summer before weeds mature. Cut and remove tall weeds 2 weeks before application. Apply in 100 gallons of water per acre. Repeat if necessary. Formulated with amitrole.
/3501900	**American Elm**	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3501902 &004.0004	2.00-3.05 (4% G)	Directed application. Apply prior to weed emergence in the fall or spring, at least 1 year after transplanting. Do not use on seedbeds or cutting beds. Do not apply more than once per year. Apply the wettable powders in a minimum of 25 gallons of water per acre.
&080.0006	2.00-3.00 (80% WP)	
&090.0006	1.98-3.06 (90% WP)	
&004.0004	1.25-1.75 lb product/1,000 sq.ft (4% G)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	American Elm (continued)	
F &045.0006	3.15 (45% WP)	Directed spray. Treat plants that have been established for at least 1 year. Apply in the spring or early summer before weeds mature. Cut and remove tall weeds 2 weeks before application. Apply in 100 gallons of water per acre. Repeat if necessary. Formulated with amitrole.
/3502100	Arborvitae	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3502102 S3501902		Directed spray and directed application. Refer to American Elm for use and limitation information.
/3502400	Austrian Pine	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3502402 &004.0004	2.00-3.05 (4% G)	Directed application. Apply prior to weed emergence in the fall or spring, at least 1 year after transplanting. Do not use on seedbeds or cutting beds. Do not apply more than once per year. Apply the wettable powders in a minimum of 25 gallons of water per acre.
&080.0006	2.00-3.00 (80% WP)	
&090.0006	1.98-3.06 (90% WP)	
&004.0004	1.25-1.75 lb product/1,000 sq.ft (4% G)	
/3502600	Balsam Fir	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Balsam Fir (continued)	
$3502602 S3501902		Directed spray and directed application. Refer to American Elm for use and limitation information.
/3402500	Barberry	N.F.
	—	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3502502 S3502402		Directed application. Refer to Austrian Pine for use and limitation information.
/3302500	Bentgrass (Astoria, Highland) (seed crop)	N.F. Do not graze treated areas for 30 days following application. Do not cut hay for 60 days following application.
$3302504 S2202804		Use limited to the Pacific Northwest. Postemergence. Refer to AGRICULTURAL CROPS, Orchardgrass (seed crop) for use and limitation information.
/3301700	Bermudagrass	N.F.
$3301715 &000.6304	0.20 lb/5,000 sq.ft (0.63% G)	Dormant. Broadcast. Apply during the dormant season, before weeds germinate. Apply when grass is dry. Water thoroughly after application.
/3532500	Bishop Pine	N.F.
$3532502 &080.0006	2.00-2.60 (80% WP)	Use limited to CA. Directed spray. Apply in at least 25 gallons of water per acre in the fall or spring, at least 1 year after transplanting. Do not use on seedbeds or cutting beds. Do not apply more than once per year.
&090.0006	1.98-3.06 (90% WP)	
/3503300	Blue Spruce	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3503302 S3502402		Directed application. Refer to Austrian Pine for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3426200	Bottlebrush	N.F.
$3426202 S3532502		Use limited to CA. Directed spray. Refer to Bishop Pine for use and limitation information.
/3503400	Boxelder	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3503402 S3502402		Directed application. Refer to Austrian Pine for use and limitation information.
/3448000	Bush Honeysuckle	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3448002 S3502402		Directed application. Refer to Austrian Pine for use and limitation information.
/3403700	Caragana	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3403702 S3502402		Directed application. Refer to Austrian Pine for use and limitation information.
/3527300	Carob	N.F.
$3527302 S3532502		Use limited to CA. Directed spray. Refer to Bishop Pine for use and limitation information.
/3302300	Centipedegrass (grown for sod)	N.F.
	--	AZ state label Registration Number 010163-06399

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Centipedegrass (grown for sod) (continued)	
$3302316 &080.0006 &090.0006	2.00-4.00 (80% WP) 1.98-3.96 (90% WP)	Use limited to areas south of NC. Broadcast. Apply to old beds within 2 days after lifting of sod. Apply to new beds on peat or muck soil, 3 to 4 days after sprigging or plugging. Apply 7 to 10 days after sprigging or plugging new beds on sandy soil. Use the lower dosage on sandy soil and the higher dosage on peat or muck soil. Apply in 20 to 40 gallons of water per acre. Repeat application using one-half the initial dosage if regrowth occurs. Do not apply within 30 days before cutting or lifting.
/3302400	Chewing's Fescue (seed crop)	N.F. Do not graze treated areas for 30 days following application. Do not cut hay for 60 days following application.
$3302404 S2202804		Use limited to the Pacific Northwest. Postemergence. Refer to AGRICULTURAL CROPS, Orchardgrass (seed crop) for use and limitation information.
/3504000	Chinese Elm	N.F.
$3404002 S3514102		Directed spray. Refer to American Beech for use and limitation information.
/3404500	Cotoneaster	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3404502 S3502402		Directed application. Refer to Austrian Pine for use and limitation information.
/3504300	Dogwood	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3504302 S3501902		Directed spray and directed application. Refer to American Elm for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3504400	Douglas-Fir	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3504402 S3501902		Directed spray and directed application. Refer to American Elm for use and limitation information.
/3504500	Eastern Hemlock	N.F.
$3504502 S3514102		Directed spray. Refer to American Beech for use and limitation information.
/3505000	Eucalyptus	N.F.
$3505002 &090.0006	1.98-3.06 (90% WP)	Directed spray. Apply in a minimum of 25 gallons of water per acre in the fall or spring, at least 1 year after transplanting. Do not use on seedbeds or cutting beds. Do not apply more than once per year.
&080.0006	2.00-2.60 (80% WP)	Use limited to CA. Directed spray. Apply in a minimum of 25 gallons of water per acre in the fall or spring, at least 1 year after transplanting. Do not use on seedbeds or cutting beds. Do not apply more than once per year.
/3405800	Firethorn	N.F.
$3405802 S3514102		Directed spray. Refer to American Beech for use and limitation information.
/3506100	Fraser Fir	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3506102 S3501902		Directed spray and directed application. Refer to American Elm for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3506800	Hemlock	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3506802 S3502402		Directed application. Refer to Austrian Pine for use and limitation information.
/3407000	Holly	N.F.
$3407002 &090.0006	1.98-3.06 (90% WP)	Directed spray. Apply in a minimum of 25 gallons of water per acre in the fall or spring, at least 1 year after transplanting. Do not use on seedbeds and cutting beds. Do not apply more than once per year.
&080.0006	2.00-2.60 (80% WP)	Use limited to WA. Directed spray. Apply in a minimum of 25 gallons of water per acre in the fall or spring, at least 1 year after transplanting. Do not use on seedbeds and cutting beds. Do not apply more than once per year.
/3507000	Honeylocust	N.F.
	—	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3507002 S3502402		Directed application. Refer to Austrian Pine for use and limitation information.
/3430500	Ilex convexa	N.F.
$3430502 S3514102		Directed spray. Refer to American Beech for use and limitation information.
/3308400	Illahee Fescue (seed crop)	N.F. Do not graze treated areas for 30 days following application. Do not cut hay for 60 days following application.
$3308404 S2202804		Use limited to the Pacific Northwest. Postemergence. Refer to AGRICULTURAL CROPS, Orchardgrass (seed crop) for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3408000	Japanese Holly	N.F.
$3408002 S3514102		Directed spray. Refer to American Beech for use and limitation information.
/3518700	Japanese Maples	N.F.
$3518702 S3514102		Directed spray. Refer to American Beech for use and limitation information.
/3507300	Juniper	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3507302 S3501902		Directed spray and directed application. Refer to American Elm for use and limitation information.
/3528200	Knobcone Pine	N.F.
$3528202 S3532502		Use limited to CA. Directed spray. Refer to Bishop Pine for use and limitation information.
/3507800	Lodgepole Pine	N.F.
$3507802 S3505002		Directed spray. Refer to Eucalyptus for use and limitation information.
/3519200	London Plane	N.F.
$3519202 S3514102		Directed spray. Refer to American Beech for use and limitation information.
/3519600	Monterey Pine	N.F.
$3519602 S3532502		Use limited to CA. Directed spray. Refer to Bishop Pine for use and limitation information.

	Site, Dosage and Formulation	Tolerance, Use, Limitations
/3508600	Mugho Pine	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3508602 S3502402		Directed application. Refer to Austrian Pine for use and limitation information.
/3509000	Norway Spruce	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3509002 S3501902		Directed spray and directed application. Refer to American Elm for use and limitation information.
/3410200	Oleander	N.F.
$3410202 &045.0006 F	3.15 (45% WP)	Directed spray. Treat plants that have been established for at least 1 year. Apply in the spring or early summer before weeds mature. Cut and remove tall weeds 2 weeks before application. Apply in 100 gallons of water per acre. Repeat if necessary. Formulated with amitrole.
S3532502		Use limited to CA. Directed spray. Refer to Bishop Pine for additional use and limitation information.
/3304000	Orchardgrass (seed crop)	N.F. Do not graze treated areas for 30 days following application. Do not cut hay for 60 days following application.
$3304004 S2202804		Use limited to the Pacific Northwest. Postemergence. Refer to AGRICULTURAL CROPS, Orchardgrass (seed crop) for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3410300	Oregongrape	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3410302 S3502402		Directed application. Refer to Austrian Pine for use and limitation information.
/3301000	Ornamental Lawn Borders	N.F.
$3301002 &005.0010 F	-- (5% Impr)	Edging treatment. Cut vegetation and loosen soil along area to be treated and fasten tape to the area. Sprinkle the area intermittently to dissolve the tape. Do not use on steep slopes or within the drip line of desirable shallow-rooted plants. Formulated with atrazine and related compounds.
/3509700	Palm	N.F.
$3509702 &080.0006	2.00 (80% WP)	Use limited to CA. Directed spray. Apply in a minimum of 25 gallons of water per acre in the fall or spring, at least 1 year after transplanting. Do not use on seedbeds and cutting beds. Do not apply more than once per year.
&090.0006	1.98 (90% WP)	
/3311500	Pennlawn Fescue (seed crop)	N.F. Do not graze treated areas for 30 days following application. Do not cut hay for 60 days following application.
$3311504 S2202804		Use limited to the Pacific Northwest. Postemergence. Refer to AGRICULTURAL CROPS, Orchardgrass (seed crop) for use and limitation information.
/3304300	Perennial Ryegrass (seed crop)	N.F. Do not graze treated areas for 30 days following application. Do not cut hay for 60 days following application.
$3304304 S2202804		Use limited to the Pacific Northwest. Postemergence. Refer to AGRICULTURAL CROPS, Orchardgrass (seed crop) for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3411100	Pieris	N.F.
$3411102 &090.0006	1.98-3.15 (90% WP)	Directed spray. Apply in a minimum of 25 gallons of water per acre in the fall or spring, at least 1 year after transplanting. Do not use on seedbeds and cutting beds. Do not apply more than once per year.
&080.0006	2.00-3.20 (80% WP)	Use limited to WA. Directed spray. Apply in a minimum of 25 gallons of water per acre in the fall or spring, at least 1 year after transplanting. Do not use on seedbeds and cutting beds. Do not apply more than once per year.
/3311400	Rainier Fescue (seed crop)	N.F. Do not graze treated areas for 30 days following application. Do not cut hay for 60 days following application.
$3311404 S2202804		Use limited to the Pacific Northwest. Postemergence. Refer to AGRICULTURAL CROPS, Orchardgrass (seed crop) for use and limitation information.
/3510400	Redcedar	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3510402 S3502402		Directed application. Refer to Austrian Pine for use and limitation information.
/3510500	Red Oak	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3510502 S3502402		Directed application. Refer to Austrian Pine for use and limitation information.

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	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3510600	Red Pine	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3510602 S3501902		Directed spray and directed application. Refer to American Elm for use and limitation information.
/3510700	Red Spruce	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3510702 S3501902		Directed spray and directed application. Refer to American Elm for use and limitation information.
/3510900	Russian Olive	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3510902 S3502402		Directed application. Refer to Austrian Pine for use and limitation information.
/3511300	Scotch Pine	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3511302 S3501902		Directed spray and directed application. Refer to American Elm for use and limitation information.

SIMAZINE

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3511500	Siberian Elm	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3511502 S3502402		Directed application. Refer to Austrian Pine for use and limitation information.
/3521100	Silver Maple	N.F.
$3521102 S3514102		Directed spray. Refer to American Beech for use and limitation information.
/3305000	St. Augustinegrass (grown for sod)	N.F.
	--	AZ state label Registration Number 010163-06399
$3305016 S3302316		Use limited to areas south of NC. Broadcast. Refer to Centipedegrass (grown for sod) for use and limitation information.
/3511900	Sycamore	N.F.
$3511902 S3514102		Directed spray. Refer to American Beech for use and limitation information.
/3305100	Tall Fescue (seed crop)	N.F. Do not graze treated areas for 30 days following application. Do not cut hay for 60 days following application.
$3305104 S2202804		Use limited to the Pacific Northwest. Postemergence. Refer to AGRICULTURAL CROPS, Orchardgrass (seed crop) for use and limitation information.
/3413700	Viburnum	N.F.
$3413702 S3514102		Directed spray. Refer to American Beech for use and limitation information.
/3522700	White Ash	N.F.
$3522702 S3514102		Directed spray. Refer to American Beech for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3512500	White Cedar	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3512502 S3502402		Directed application. Refer to Austrian Pine for use and limitation information.
/3522800	White Fir	N.F.
$3522802 S3505002		Directed Spray. Refer to Eucalyptus for use and limitation information.
/3512600	White Pine	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3512602 S3502402		Directed application. Refer to Austrian Pine for use and limitation information.
/3512700	White Spruce	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3512702 S3501902		Directed spray and directed application. Refer to American Elm for use and limitation information.
/3513000	Yew	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3513002 S3501902		Directed spray and directed application. Refer to American Elm for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3305600	Zoysia Grass (grown for sod)	N.F.
	—	AZ state label Registration Number 010163-06399
$3305616 S3302316		Use limited to areas south of NC. Broadcast. Refer to Centipedegrass (grown for sod) for use and limitation information.
■	RIGHTS-OF-WAY	
/6701300	Rights-of-Way	N.F. General Information: Rights-of-way include roadways, highway medians, highways, railroads, railyards, fire lanes, utilities, transformer stations, pipelines, and around guard rails. Use the higher dosages for perennial weed control, for longer residual control, and in areas with high rainfall or a long growing season.
	--	AZ state labels
F		Registration Number 010163-06399 Registration Number 038059-09682 Formulated with sodium metaborate, sodium chlorate, and prometone.
F		CA state labels Registration Number 005481-03854 Formulated with atrazine and related compounds. Registration Number 005481-03856 Registration Number 006973-04607
$6701302	10.00-40.00	Broadcast. Apply before weed emergence or following weed removal. Apply the wettable powder and flowable concentrate in a minimum of 1 gallon of water per 0.8 pound active ingredient. If weed growth has begun prior to application and removal is not possible, tank mix with a contact or translocated herbicide. Aerial applications may be made where practical.
&004.0004	(4% G)	
I9900300		
I9001500	4.77-39.66	
&090.0006	(90% WP)	
	4.80-40.00	
&080.0006	(80% WP)	
&104.0014	(4 lb/gal FlC)	

SIMAZINE

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Rights-of-Way (continued)	
F &004.0004	8.00-34.85 (4% G)	Broadcast. Apply just before or after weed growth begins. Formulated with karbutilate; sodium metaborate and sodium chlorate; or sodium metaborate, sodium chlorate, and prometone.
&008.0004	10.45-20.00 (8% G)	
&010.0004	15.00-22.50 (10% G)	
&000.7505	1.63-6.53 (0.75% P/T)	
=	COMMERCIAL AND INDUSTRIAL PREMISES	
/6700000	Noncrop Areas	N.F. General Information: Noncrop areas include industrial sites, storage areas, petroleum tank farms, lumberyards, fencerows, airports, military installations, transformer substations, and around buildings, machinery and fuel tanks.
	--	AZ state labels Registration Number 010163-06399
F		Registration Number 038059-09682 Formulated with sodium metaborate, sodium chlorate, and prometone.
		CA state labels
F		Registration Number 005481-03854 Formulated with atrazine and related compounds.
		Registration Number 005481-03858
$6700002 &004.0004 I9900300	10.00-40.00 (4% G)	Broadcast. Apply before weed emergence or following weed removal. Apply the wettable powder and flowable concentrate in a minimum of 1 gallon of water per 0.8 pound active ingredient. If weed growth has begun prior to application and removal is not possible, tank mix with a contact or translocated herbicide. Aerial applications may be made where practical.
I9001500 &090.0006	4.77-39.66 (90% WP)	
&080.0006	4.80-40.00 (80% WP)	
&104.0014	(4 lb/gal FlC)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Noncrop Areas (continued)	
F &004.0004	8.00-34.85 (4% G)	Broadcast. Apply just before or after weed growth begins, usually in the spring or early summer. Cut and remove tall weeds 2 weeks before application. Apply the wettable powder in 100 gallons of water per acre and the flowable concentrate in a minimum of 50 gallons of water per acre. Formulated with amitrole; karbutilate; sodium metaborate and sodium chlorate; or sodium metaborate, sodium chlorate, and prometone.
&008.0004	10.45-20.00 (8% G)	
&010.0004	15.00-22.50 (10% G)	
&000.7505	1.63-6.53 (0.75% P/T)	
&045.0006	9.00 (45% WP)	
&100.8814	7.67-7.92 (0.88 lb/gal FlC)	
=	DOMESTIC DWELLINGS, MEDICAL FACILITIES AND SCHOOLS	
/6700000	Noncrop Areas	N.F. General Information: Noncrop areas include cemeteries, recreation areas, campsites, picnic areas, tennis courts, ball diamonds, outdoor theaters, paved areas, walkways, paths, patios, curbs, driveways, parking areas, terraces, around buildings and fencerows. Use the higher dosages for perennial weed control, for longer residual control, and in areas with high rainfall or a long growing season.
	--	CA state labels Registration Number 006973-04607 Registration Number 011093-07123
$6700002	10.00-40.00	Broadcast. Apply before weed emergence or following weed removal. Apply the wettable powder and flowable concentrate in a minimum of 1 gallon of water per 0.8 pound active ingredient. If weed growth has begun prior to application and removal is not possible, tank mix with a contact or translocated herbicide. Aerial applications may be made where practical.
&004.0004	(4% G)	
I9900300		
I9001500	4.77-39.66	
&090.0006	(90% WP)	
	4.80-40.00	
&080.0006	(80% WP)	
&104.0014	(4 lb/gal FlC)	

SIMAZINE

Noncrop Areas (continued)

	Site, Dosage and Formulation (lb a.i./A(lb a.i./A))	Tolerance, Use, Limitations
F &004.0004	8.00-34.85 (4% G)	Broadcast. Apply just before or after weed growth begins, usually in the spring or early summer. Cut and remove tall weeds 2 weeks before application. Apply the wettable powder in 100 gallons of water per acre, the 0.88 pound per gallon flowable concentrate in a minimum of 50 gallons of water per acre, the 3 percent flowable concentrate in 6.66 gallons of water per 1,000 square feet, and the soluble concentrate in 40 gallons of water per 1,000 square feet. Formulated with amitrole; sodium metaborate and sodium chlorate; or sodium metaborate, sodium chlorate, and prometone.
&008.0004	10.45-20.00 (8% G)	
&000.7505	1.63-6.53 (0.75% P/T)	
&045.0006	9.00 (45% WP)	
&100.8814	7.67-7.92 (0.88 lb/gal FlC)	
&000.7504	0.50-2.00 lb product/ 100 sq.ft (0.75% G)	
&001.0004	2.00 lb product/100 sq.ft (1% G)	
&001.0015	2.00-3.00 lb product/100 sq.ft (1% SC/S)	
&203.0014	0.67 pt product/ 100 sq.ft (3% FlC)	

SIMAZINE

FOREST, CHAPARRAL, NONAGRICULTURAL AND WASTELANDS

General Warnings and Limitations: Do not use on seedbeds or cutting beds. In CA, OR and WA, do not apply to Christmas trees or shelterbelts within 1 year after transplanting. In other areas, do not apply to transplants less than 3 years of age. Do not apply more than once a year, except as directed for quackgrass control.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3012600	American Beech (forest)	N.F.
$3012602 S3514102		Directed spray. Refer to ORNAMENTALS, American Beech for use and limitation information.
/3012700	American Elm (forest)	N.F.
$3012702 S3514102		Directed spray. Refer to ORNAMENTALS, American Beech for use and limitation information.
/3001900	Arborvitae (forest/shelterbelt)	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3001902 &004.0004 &080.0006 &090.0006	2.00-4.00 (4% G) (80% WP) 1.98-3.96 (90% WP)	Directed application. Broadcast or band. Remove weed growth prior to application. Apply the wettable powder formulations in a minimum of 25 gallons of water per acre. Use the same rate for annual maintenance applications.
&004.0004 &080.0006 &090.0006	4.00 (4% G) (80% WP) 3.96 (90% WP)	Directed application. Broadcast or band. Quackgrass control. Apply once in the fall, or apply as a split application, using one-half the dosage in the fall and again in early spring after quackgrass begins growth. Apply the wettable powder formulations in a minimum of 25 gallons of water per acre.
F &045.0006	3.15 (45% WP)	Directed spray. Treat plants that have been established for at least 1 year. Apply in the spring or early summer before weeds mature. Cut and remove tall weeds 2 weeks before application. Apply in 100 gallons of water per acre. Repeat if necessary. Formulated with amitrole.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3008400	Austrian Pine (shelterbelt)	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3008402 &004.0004 &080.0006 &090.0006	2.00-4.00 (4% G) (80% WP) 1.98-3.96 (90% WP)	Directed application. Broadcast or band. Remove weed growth prior to application. Apply the wettable powder formulations in a minimum of 25 gallons of water per acre. Use the same rate for annual maintenance applications.
&004.0004 &080.0006 &090.0006	4.00 (4% G) (80% WP) 3.96 (90% WP)	Directed application. Broadcast or band. Quackgrass control. Apply once in the fall, or apply as a split application, using one-half the dosage in the fall and again in early spring after quackgrass begins growth. Apply the wettable powder formulations in a minimum of 25 gallons of water per acre.
/3012800	Balsam Fir (forest/ shelterbelt)	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3012802 S3001902		Directed spray and directed application. Refer to Arborvitae (forest/shelterbelt) for use and limitation information.
/3011100	Bishop Pine (shelterbelt)	N.F.
$3011102 &080.0006 &090.0006	2.00-4.00 (80% WP) 1.98-3.96 (90% WP)	Use limited to CA. Directed spray. Broadcast or band. Remove weed growth prior to application. Apply in a minimum of 25 gallons of water per acre. Use the same rate for annual maintenance applications.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Bishop Pine (shelterbelt) (continued)	
&080.0006	4.00 (80% WP)	Use limited to CA. Directed spray. Broadcast or band. Quackgrass control. Apply once in the fall, or apply as a split application, using one-half the dosage in the fall and again in early spring after quackgrass begins growth. Apply in a minimum of 25 gallons of water per acre.
&090.0006	3.96 (90% WP)	
/3002700	**Black Walnut (plantation)**	N.F. General Information: Do not use on seed nurseries.
$3002702 &080.0006	2.00-4.00 (80% WP)	Pretransplant or posttransplant. Broadcast or band. Apply prior to weed emergence or following removal of weed growth. If new growth is present, apply as a directed spray, avoiding contact with foliage. Apply in 20 to 100 gallons of water per acre.
&090.0006	1.98-3.96 (90% WP)	
/3014100	**Blue Spruce (shelterbelt)**	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3014102 S3008402		Directed application. Refer to Austrian Pine (shelterbelt) for use and limitation information.
/3002900	**Boxelder (shelterbelt)**	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3002902 S3008402		Directed application. Refer to Austrian Pine (shelterbelt) for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3014000	Caragana (shelter-belt)	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3014002 S3008402		Directed application. Refer to Austrian Pine (shelterbelt) for use and limitation information.
/3000500	Christmas Tree Plantation	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3000502 S3008402		Directed application. Refer to Austrian Pine (shelterbelt) for use and limitation information.
/3003900	Douglas-Fir (forest/shelterbelt)	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3003902 S3001902		Directed spray and directed application. Refer to Arborvitae (forest/shelterbelt) for use and limitation information.
/3012900	Fraser Fir (forest/shelterbelt)	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3012902 S3001902		Directed spray and directed application. Refer to Arborvitae (forest/shelterbelt) for use and limitation information.

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	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3004600	Hemlock (shelterbelt)	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3004602 S3008402		Directed application. Refer to Austrian Pine (shelterbelt) for use and limitation information.
/3011500	Holly (shelterbelt)	N.F.
$3011502 &090.0006	1.98-3.15 (90% WP)	Directed spray. Broadcast or band. Remove weed growth prior to application. Apply in a minimum of 25 gallons of water per acre. Use the same rate for annual maintenance applications.
&080.0006	2.00-3.00 (80% WP)	
&090.0006	3.15 (90% WP)	Directed spray. Broadcast or band. Quackgrass control. Apply once in the fall, or apply as a split application, using one-half the dosage in the fall and again in early spring after quackgrass begins growth. Apply in a minimum of 25 gallons of water per acre.
&080.0006	3.20 (80% WP)	
/3004800	Honeylocust (shelterbelt)	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3004802 S3008402		Directed application. Refer to Austrian Pine (shelterbelt) for use and limitation information.
/3005000	Juniper (forest/shelterbelt)	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3005002 S3001902		Directed spray and directed application. Refer to Arborvitae (forest/shelterbelt) for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3008300	Knobcone Pine (shelterbelt)	N.F.
$3008302 S3011102		Use limited to CA. Directed spray. Refer to Bishop Pine (shelterbelt) for use and limitation information.
/3009700	Loblolly Pine (plantation)	N.F. General Information: Do not use on seed nurseries.
$3009702 &080.0006 &090.0006	4.00-6.00 (80% WP) 3.96-5.94 (90% WP)	Use limited to the South; for establishment only. Pretransplant or posttransplant. Broadcast or band. Apply prior to weed emergence or following removal of weed growth. If new growth is present, apply as a directed spray, avoiding contact with foliage. Apply in 20 to 100 gallons of water per acre.
I9900300 &080.0006 &090.0006	3.20-4.80 (80% WP) 3.15-4.77 (90% WP)	Use limited to the South; for establishment only. Pretransplant or posttransplant. Broadcast or band. Apply prior to weed emergence or following removal of weed growth. If new growth is present, apply as a directed spray avoiding contact with foliage. Apply in 20 to 100 gallons of water per acre. May be tank mixed with atrazine and related compounds.
/3009800	Lodgepole Pine (shelterbelt)	N.F.
$3009802 S3008402		Directed application. Refer to Austrian Pine (shelterbelt) for use and limitation information.
/3011200	Monterey Pine (shelterbelt)	N.F.
$3011202 S3011102		Use limited to CA. Directed spray. Refer to Bishop Pine (shelterbelt) for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3013000	Norway Spruce (forest/shelterbelt)	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3013002 S3001902		Directed spray and directed application. Refer to Arborvitae (forest/shelterbelt) for use and limitation information.
/3006100	Redcedar (shelterbelt)	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3006102 S3008402		Directed application. Refer to Austrian Pine (shelterbelt) for use and limitation information.
/3010300	Red Pine (forest/shelterbelt)	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3010302 S3001902		Directed spray and directed application. Refer to Arborvitae (forest/shelterbelt) for use and limitation information.
/3012500	Red Spruce (forest/shelterbelt)	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3012502 S3001902		Directed spray and directed application. Refer to Arborvitae (forest/shelterbelt) for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3012100	Russian Olive (shelterbelt)	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3012102 S3008402		Directed application. Refer to Austrian Pine (shelterbelt) for use and limitation information.
/3011300	Scotch Pine (forest/ shelterbelt)	N.F.
	--	AZ state label Registration Number 010163-06399 CA state label Registration Number 005481-03858
$3011302 S3001902		Directed spray and directed application. Refer to Arborvitae (forest/shelterbelt) for use and limitation information.
/3013100	Silver Maple (forest)	N.F.
$3013102 S3514102		Directed spray. Refer to ORNAMENTALS, American Beech for use and limitation information.
/3010400	Slash Pine (plantation)	N.F. General Information: Do not use on seed nurseries.
$3010402 &080.0006	4.00-6.00 (80% WP)	Use limited to the South; for establishment only. Pretransplant or posttransplant. Broadcast or band. Apply prior to weed emergence or following removal of weed growth. If new growth is present, apply as a directed spray, avoiding contact with foliage. Apply in 20 to 100 gallons of water per acre.
&090.0006	3.96-5.94 (90% WP)	
/3006600	Sycamore (forest)	N.F.
$3006602 S3514102		Directed spray. Refer to ORNAMENTALS, American Beech for use and limitation information.
/3013200	White Ash (forest)	N.F.
$3013202 S3514102		Directed spray. Refer to ORNAMENTALS, American Beech for use and limitation information.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
/3009200	White Fir (shelterbelt)	N.F.
$3009202 S3008402		Directed application. Refer to Austrian Pine (shelterbelt) for use and limitation information.
/3013500	White Pine (plantation)	N.F. General Information: Do not use on seed nurseries.
$3013502 S3010402		Use limited to the South; for establishment only. Pretransplant or posttransplant. Refer to Slash Pine (plantation) for use and limitation information.
/3010800	White Spruce (forest/shelterbelt)	N.F.
$3010802 S3001902		Directed spray and directed application. Refer to Arborvitae (forest/shelterbelt) for use and limitation information.
/3007300	Yew (forest/shelterbelt)	N.F.
$3007302 S3001902		Directed spray and directed application. Refer to Arborvitae (forest/shelterbelt) for use and limitation information.

EPA Index to Pesticide Chemicals

SIMAZINE

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
=	AQUATIC AREAS	
	General Warnings and Limitations: Water temperature of 80 F (26.7 C) or greater results in faster algae control.	
:	(Industrial)	
/6501900	Commercial and Industrial Water Cooling Tower Systems	N.F. General Information: Use only in industrial recirculating water cooling towers under 25,000 tons (250,000 gallons capacity). Apply one-half of the dosage when one-half of the water in the system has been lost by blow-down.
$6501961 &201.0016	96.00-134.00 fl.oz product/ 1,000 gal (1% RTU)	Water treatment. Shock treatment. Clean badly fouled systems before treatment. Apply at a point in the system where the product will be uniformly mixed.
&201.0016	2.00-58.00 fl.oz product/ 1,000 gal (1% RTU)	Water treatment. Maintenance application. Apply when control is evident.
:	(Adjacent to Water)	
/6501300	Drainage Ditch Banks	N.F. General Information: Use the higher dosage for prennial weed control, for longer residual control, and in areas with high rainfall or a long growing period.
	--	CA state label Registration Number 011093-07123
$6501362 &004.0004 I9900300	10.00-40.00 (4% G)	Broadcast. Apply before weed emergence or following weed removal. Apply the wettable powder and flowable concentrate in a minimum of 1 gallon of water per 0.8 pound active ingredient. If weed growth has begun prior to application and removal is not possible, tank mix with a contact or translocated herbicide.
&090.0006	4.77-39.66 (90% WP)	
&080.0006 &104.0014	4.80-40.00 (80% WP) (4 lb/gal FlC)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Drainage Ditch Banks (continued)	
F &004.0004	8.00-34.85 (4% G)	Broadcast. Apply just before or after weed growth begins.
&000.7505	1.63-6.53 (0.75% P/T)	Formulated with sodium metaborate and sodium chlorate; or sodium metaborate, sodium chlorate, and prometone.
:	(Ornamental and Recreational)	
/6502300	Aquaria, Ornamental Fish Ponds and Fountains	N.F. General Information: Treatment is normally effective for several weeks. Repeat treatment when algae reappear. For heavy algal growth repeat in 6 or 7 days. Decayed algae should be removed prior to second application.
$6502361 &080.0006	1.33 oz product/ 10,000 gal (80% WP)	Water treatment. Mix the product in water and distribute evenly over the surface to be treated.
&200.1016	1.00 tbls product/ 5 gal (0.1% RTU)	Water treatment.
&200.6016	1.00 tsp product/ 10 gal (0.6% RTU)	
F &000.5506	0.41 oz product/ 100 gal (0.55% WP)	Water treatment. Apply when the pond is clean or when algae become visible. Mix the dosage in a pail of water. Do not mix more than 4 ounces of product at a time. Slowly pour the mixture into the water around the edge of the pond. Do not pour the concentrated mixture directly onto desirable aquatic plants.
&001.1006	0.32 oz product/ 100 gal (1.1% WP)	Formulated with monuron and atrazine and related compounds; or chlorine, monuron, and atrazine and related compounds.
F &000.5505 &000.6005	2 tablets/10 gal (0.55% P/T) (0.6% P/T)	Water treatment. Initial application. Apply to a clean aquarium. Formulated with dichlone, monuron, and atrazine and related compounds.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Aquaria, Ornamental Fish Ponds and Fountains (continued)	
F &000.5505 &000.6005	1 tablet/10 gal (0.55% P/T) (0.6% P/T)	Water treatment. Maintenance application. Apply every 2 weeks. For aquaria smaller than 5 gallons, apply 1 tablet every month. Formulated with dichlone, monuron, and atrazine and related compounds.
/6501100	Swimming Pools	N.F.
	—	CA state labels Registration Number 000266-06907 Registration Number 009610-10190 Registration Number 011005-06908
$6501161 &011.0004	1.60 lb product/ 10,000 gal (11% G)	Water treatment. Black algae control. Initial application. Apply when algae are first visible. Mix the dosage in water and pour into skimmer or distribute evenly around edges of pool. To accelerate results, remove top of algal growth with wire brush daily and vacuum out settled algae. After 1 week initiate maintenance application.
&080.0006	2.67 oz product/ 10,000 gal (80% WP)	
&201.0016	205.00 fl.oz product/10,000 gal (1% RTU)	Water treatment. Black algae control. Initial application. Apply when algae are first visible. Pour into skimmer or distribute evenly around edges of pool. To accelerate results, remove top of algal growth with wire brush daily and vacuum out settled algae. After 1 week initiate maintenance application.
F &207.5014	12.00 fl.oz product/10,000 gal (7.5% FlC)	Water treatment. Black algae control. Initial application. Apply to a pool with established black algae. Mix the dosage in water and distribute evenly throughout the pool. Formulated with sodium dimethyldithiocarbamate.
F &012.0004 &012.0005	8.00 oz product/ 10,000 gal (12% G) (12% P/T)	Water treatment. Black algae control. Initial application. Apply to a pool with established black algae. Apply the product in the areas where the algae are growing. If severe infestations are present, the filters should be turned off for 4 to 6 hours during the treatment. Repeat the treatment twice a week until control is established. Formulated with sodium dichloro-s-triazinetrione; or sodium dichloro-s-triazinetrione and trichloro-s-triazinetrione.

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Swimming Pools (continued)	
F &012.0004 &207.5014	4.00 oz product/ 10,000 gal (12% G) (7.5% FlC)	Water treatment. Black algae control. Maintenance application. Mix the dosage in water or apply directly to the pool. Distribute evenly throughout the pool. Repeat treatment 1 or 2 times weekly. Formulated with sodium dimethyldithiocarbamate; sodium dichloro-s-triazinetrione; or sodium dichloro-s-triazinetrione and trichloro-s-triazinetrione.
&080.0006	2.00 oz product/ 10,000 gal (80% WP)	Water treatment. Initial application. Apply when algae are first visible. Mix the dosage in water and pour into skimmer or distribute evenly around edges of pool. One week after treatment, brush algae from walls. Vacuum out settled algae and initiate maintenance application.
&011.0004	1.20 lb product/ 10,000 gal (11% G)	
&201.0016	136.00 fl.oz product/10,000 gal (1% RTU)	Water treatment. Initial application. Apply when algae are first visible. Pour into skimmer or distribute evenly around edges of pool. One week after treatment, brush algae from walls. Vacuum out settled algae and initiate maintenance application.
F &012.0004	4.00 oz product/ 10,000 gal (12% G)	Water treatment. Initial application. Apply to a pool with visible algae. Mix the dosage in water or apply directly to the pool. Distribute evenly throughout the pool. Repeat treatment 1 or 2 times a week until control is established. Formulated with sodium dimethyldithiocarbamate; poly(oxyethylene(dimethylimino)ethylene-(dimethylimino)ethylene dichloride); sodium dichloro-s-triazinetrione; or sodium dichloro-s-triazinetrione and trichloro-s-triazinetrione.
&012.0004 &012.0005	8.00 oz product/ 10,000 gal (12% G) (12% P/T)	
&207.5014	12.00 fl.oz product/10,000 gal (7.5% FlC)	
&203.5014	12-18 ppm product (3.5% FlC)	

	Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
	Swimming Pools (continued)	
F &207.5014	8.00 fl.oz product/10,000 gal (7.5% FlC)	Water treatment. Initial application. Apply to a pool with no visible algae. Mix the dosage in water and distribute evenly throughout the pool. Formulated with sodium dimethyldithiocarbamate.
&011.0004	0.80 lb product/ 10,000 gal (11% G)	Water treatment. Maintenance application. Apply to a clean pool. Mix the dosage in water and pour into the skimmer or distribute evenly around edges of pool. Repeat treatment every 8 to 10 weeks or when algae reappear.
&080.0006	1.33 oz product/ 10,000 gal (80% WP)	
&201.0016	103.00 fl.oz product/10,000 gal (1% RTU)	Water treatment. Maintenance application. Apply to a clean pool. Pour into the skimmer or distribute evenly around edges of pool. Repeat treatment every 8 to 10 weeks or when algae reappear.
F &207.5014	4.00 fl.oz product/ 10,000 gal (7.5% FlC)	Water treatment. Maintenance application. Mix the dosage in water or apply directly to the pool. Distribute evenly throughout the pool. Repeat treatment weekly or when algae reappear. Formulated with sodium dimethyldithiocarbamate; or poly(oxyethylene(dimethylimino)ethylene-(dimethylimino)ethylene dichloride).
&203.5014	3-6 ppm product (3.5% FlC)	
F &203.0014	42.50 fl.oz product/10,000 gal (3% FlC)	Water treatment. Winterizing application. Apply when the swimming season has ended and after the pool has been cleaned and shut off. If algae reappear, repeat the treatment. Formulated with poly(oxyethylene(dimethylimino) ethylene(dimethylimino)ethylene dichloride).

Site, Dosage and Formulation (lb a.i./A)	Tolerance, Use, Limitations
AERIAL AND TANK MIX APPLICATIONS	
Aerial Application	
--	Refer to AGRICULTURAL CROPS Alfalfa, Alfalfa-Orchardgrass Mixture, Bermudagrass, Corn AGRICULTURAL PREMISES All sites RIGHTS-OF-WAY All sites COMMERCIAL AND INDUSTRIAL PREMISES All sites
Tank Mix	
--	Refer to AGRICULTURAL CROPS Alfalfa, Almond, Apple, Cherry, Corn, Filbert, Grapefruit, Grapes, Lemon, Orange, Peach, Pear, Pecan, Plum, Walnut AGRICULTURAL PREMISES All sites RIGHTS-OF-WAY All sites COMMERCIAL AND INDUSTRIAL PREMISES All sites DOMESTIC DWELLINGS, MEDICAL FACILITIES AND SCHOOLS All sites FOREST, CHAPARRAL, NONAGRICULTURAL AND WASTELANDS Loblolly Pine (plantation)

Listing of Registered Pesticide Products by Formulation

&095.0001	95% technical chemical
#	simazine (080807)
	002749-00292 013801-00006
&097.0001	97% technical chemical
#	simazine (080807)
	000100-00541
&098.0001	98% technical chemical
#	simazine (080807)
	039511-00005
&080.0002	80% formulation intermediate
#	simazine (080807)
	011603-00011
&000.1704	0.167% granular
#	simazine (080807)
	000100-00500 002342-00749
&000.2504	0.25% granular
#	simazine (080807)
	000072-00564 000100-00499 000477-00286 002342-00748 008590-00442
&000.6304	0.63% granular
#	simazine (080807)
	007401-00192
&000.7504	0.75% granular
#	simazine (080807), sodium metaborate (011104), sodium chlorate (073301) plus prometone (080804)
	000100-00574 038059-09682
&001.0004	1% granular
#	simazine (080807), sodium metaborate (011104) plus sodium chlorate (073301)
	000239-02232
&001.5004	1.5% granular
#	simazine (080807)
	006973-04607 011093-07123
&002.0004	2% granular
#	simazine (080807)
	011656-00047 011656-05903
#	simazine (080807) plus atrazine and related compounds (080803)
	005481-03854

EPA Index to Pesticide Chemicals

SIMAZINE

Listing of Registered Pesticide Products by Formulation (continued)

&004.0004 4% granular
# simazine (080807)
000072-00289 000100-00435 000912-00075 001022-00431
003743-00264 005481-03856

# simazine (080807), sodium metaborate (011104) plus sodium chlorate (073301)
000100-00476 001022-00433

&008.0004 8% granular
# simazine (080807)
001022-00418

# simazine (080807), sodium metaborate (011104) plus sodium chlorate (073301)
001022-00422

010.0004 10% granular
# simazine (080807) plus karbutilate (097401)
000100-00595

&011.0004 11% granular
# simazine (080807)
007124-00032

&012.0004 12% granular
# simazine (080807) plus sodium dichloro-s-triazinetrione (081404)
007364-00027

# simazine (080807), sodium dichloro-s-triazinetrione (081404) plus trichloro-s-triazinetrione (081405)
007364-00014

&000.5505 0.55% pelleted/tableted
# simazine (080807), dichlone (029601), monuron (035501) plus atrazine and related compounds (080803)
007364-00003 007364-00008

&000.6005 0.6% pelleted/tableted
# simazine (080807), dichlone (029601), monuron (035501) plus atrazine and related compounds (080803)
008709-00001

&000.7505 0.75% pelleted/tableted
# simazine (080807), sodium metaborate (011104), sodium chlorate (073301) plus prometone (080804)
000100-00479

Listing of Registered Pesticide Products by Formulation (continued)

&012.0005 12% pelleted/tableted
simazine (080807), sodium dichloro-s-triazinetrione (081404) plus
trichloro-s-triazinetrione (081405) #
007364-00015

&000.5506 0.55% wettable powder
simazine (080807), dichlone (029601), monuron (035501) plus atrazine
and related compounds (080803) #
007476-00001

&001.1006 1.1% wettable powder
simazine (080807), monuron (035501) plus atrazine and related
compounds (080803) #
007364-00004

&045.0006 45% wettable powder
simazine (080807) plus amitrole (004401) #
000264-00124

&080.0006 80% wettable powder
simazine (080807) #
000100-00437 000100-00570 000100-04283 000100-04296
000464-00483 002749-00163 007001-00185 008791-00014
009610-10190 010163-06399 013765-00002 013765-00003
039511-00012

&090.0006 90% wettable powder
simazine (080807) #
000100-00603

&0005.0010 5% impregnated materials
simazine (080807) plus atrazine and related compounds (080803) #
010780-00001

&100.8814 0.88 lb/gal flowable concentrate
simazine (080807) plus amitrole (004401) #
000264-00196

&104.0014 4 lb/gal flowable concentrate
simazine (080807) #
000100-00526

&203.0014 3% flowable concentrate
simazine (080807) plus amitrole (004401) #
000264-00156

simazine (080807) plus poly(oxyethylene(dimethylimino)ethylene-
(dimethylimino)ethylene dichloride) (069183) #
003432-00033

Listing of Registered Pesticide Products by Formulation (continued)

&203.5014 3.5% flowable concentrate
simazine (080807) plus poly(oxyethylene(dimethylimino)ethylene-
# (dimethylimino)ethylene dichloride) (069183)
007364-00023

&207.5014 7.5% flowable concentrate
# simazine (080807) plus sodium dimethyldithiocarbamate (034804)
007364-00011

&001.0015 1% soluble concentrate/solid
simazine (080807), sodium metaborate (011104) plus sodium chlorate
# (073301)
000239-02232

&020.0015 20% soluble concentrate/solid
# simazine (080807)
000266-06907 011005-06908

&200.6015 0.6% soluble concentrate/liquid
# simazine (080807)
007689-00014

&200.1016 0.1% liquid-ready to use
# simazine (080807)
013765-00001

&201.0016 1% liquid-ready to use
# simazine (080807)
001769-00234 001769-00245

II. REQUIREMENT FOR SUBMISSION OF GENERIC DATA

A. This portion of the guidance document is a Notice issued under the authority of FIFRA Section 3(c)(2)(B) and describes, in table format, the data required for maintaining the registrability of each product. Additionally, a bibliography (Appendix II-1) is included that identifies that data considered as part of the data base supporting this standard. EPA has determined that additional generic data described in this Notice must be submitted to EPA for evaluation in order to maintain in effect the registration(s) of your product(s) identified as an attachment to the cover letter accompanying this guidance document. As required by FIFRA Section 3(c)(2)(B), you are required to take appropriate steps to comply with this Notice.

EPA may suspend the registration of each of those products unless, within the specified time, you have informed EPA how you will satisfy the requirements of this Notice. Any such suspension will remain in effect until you have complied with the terms of this Notice.

B. What Generic Data 1/ Must Be Submitted. You may ascertain which generic data you must submit by consulting Table A at the end of this chapter. That table shows all the generic data needed to evaluate the continued registrability of all products, and the dates by which the data must be submitted. The required data must be submitted and any necessary studies must be conducted in accordance with EPA-approved protocols, the Pesticide Registration Guidelines 2/, or data collected under the approved protocols of the Organization for Economic Cooperation and Development (OECD). If you wish not to develop data which are necessary to support the registration or reregistration of certain uses appearing in your labeling, you may delete those uses at the time you submit your revised labeling.

Also for certain kinds of testing (generally ecological effects), EPA requires the test substance to be a "typical formulation," and in those cases EPA needs data of that

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1/ Generic data pertain to the properties or effects of a particular ingredient, and thus are relevant to an evaluation of the risks of all products containing that ingredient (or all such products having a certain use pattern), regardless of any such product's unique composition or use. Product-specific data relate only to the properties or effects of a product with a particular composition (or a group of products with closely similar composition).

2/ The Pesticide Registration Guidelines were reproposed on November 24, 1982 in 47 Federal Register 53192.

type for each major formulation category (e.g., emulsifiable concentrates, wettable powders, granulars, etc.) These are classified as generic data and when needed are specified in Table A. EPA may possess data on certain "typical formulations" but not others. Note: The "typical formulation" data should not be confused with product-specific data (Table B) which are required on each formulation. Product-specific data are further explained in Chapter IV of this document.

C. Options Available for Complying With Requirements to Submit Data

Within 90 days of your receipt of this Notice you must submit to EPA a completed copy of the form entitled "FIFRA Section 3(c)(2)(B) Summary Sheet" [EPA Form 8580-1, Appendix II-2] for each of your products. On that form you must state which of the following methods you will use to comply with the requirements of this Notice:

1. (a) Notify EPA that you will submit the data, and

   (b) either submit the existing data you believe will satisfy the requirement, or state that you will generate the data by conducting testing. If the test procedures you will use deviate from (or are not specified in) the Registration Guidelines or protocols contained in the Reports of Expert Groups to the Chemicals Group, Organization for Economic Cooperation and Development (OECD) Chemicals Testing Programme, you must enclose the protocols you will use.

2. Notify EPA that you have entered into an agreement with one or more other registrants to jointly develop (or share in the cost of developing) the data. If you elect this option, you must notify EPA which registrant(s) are parties to the agreement.

3. File with EPA a completed "Certification of Attempt to Enter Into an Agreement With Other Registrants for Development of Data" (EPA Form 8580-6, Appendix II-3)*/

4. Request that EPA amend your registration by deleting the uses for which the data are needed. (This option is not available to applicants for new products.)

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*/ FIFRA Section 3(c)(2)(B) authorizes joint development of data by two or more registrants, and provides a mechanism by which parties can obtain an arbitrator's decision if they agree to jointly develop data but fail to agree on all the terms of the agreement. The statute does not compel any registrant to agree to develop data jointly.
(Footnote continued at bottom of next page)

5. Request voluntary cancellation of the registration(s) of your products for which the data are needed. (This option is not available to applicants for new products.)

D. Procedures for Requesting Changes in Testing Methodology and Extensions of Time

EPA recognizes that you may disagree with our conclusions regarding the appropriate ways to develop the required data or how quickly the data must be submitted. If the test procedures you plan to use deviate from (or are not specified in) the registration guidelines or protocols contained in the reports of the Expert Groups to the Chemical Groups, Organization for Economic Cooperation and Development (OECD) Chemicals Testing Programme, you must submit the protocol for Agency review prior to the initiation of the test.

If you think that you will need more time to generate the required data than is allowed by EPA's schedule, you may submit a request for an extension of time. The extension request must be submitted in writing to the Product Manager. The extension request should state the reasons why you conclude that an extension is appropriate. While EPA considers your request, you must strive to meet the deadline for submitting the required data.

(Footnote continued from previous page)

In EPA's opinion, joint data development by all registrants who are subject to the requirements to submit a pertinent item of data or a cost-sharing agreement among all such registrants is clearly in the public interest. Duplication of testing could increase costs, tie up testing facilities, and subject an unnecessarily large number of animals to testing.

As noted earlier, EPA has discretion not to suspend the registration of a product when a registrant fails to submit data required under FIFRA Section 3(c)(2)(B). EPA has concluded that it is appropriate to exercise its discretion not to suspend in ways which will discourage duplicative testing. Accordingly, if (1) a registrant has informed us of his intent to develop and submit data required by this Notice; and (2) a second registrant informs EPA that it has made a bona fide offer to the first registrant to share in the expenses of the testing [on terms to be agreed upon or determined by arbitration under FIFRA Section 3(c)(2)(B)(iii)]; and (3) the first registrant has declined to agree to enter into a cost-sharing agreement, EPA will not suspend the second firm's registration. While the first firm is not required to agree to jointly develop data, EPA is not required to force the second firm to engage in economically inefficient duplicative testing in order to maintain its registration.

TABLE A
GENERIC DATA REQUIREMENTS FOR SIMAZINE, EPA REG. NO. 100-541 (97% T)[1]

Data Requirement	Composition[2]	Does EPA Have Data to Satisfy This Requirement? (yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	TGAI	Yes	00023955 GS-650070-1 GS-650070-2 GS-650070-5 GS-650070-6	No
61-2 - Description of Beginning Materials and Manufacturing Process	TGAI	Partially	00023955 GS-650070-1 GS-650070-2 GS-650070-5	Yes
61-3 - Discussion of Formation of Impurities	TGAI	No		Yes
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	TGAI	No		Yes
62-2 - Certification of Ingredient Limits	TGAI	No		Yes
62-3 - Analytical Methods to Verify Certified Limits	TGAI	No		Yes

TABLE A
GENERIC DATA REQUIREMENTS FOR SIMAZINE, EPA REG. NO. 100-541 (97% T)1/

Data Requirement	Composition2/	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?3/
158.120 Product Chemistry (continued)				
Physical and Chemical Characteristics				
63- 2 - Color	TGAI	Yes	00023955	No
63- 3 - Physical State	TGAI	Yes	00023955	No
63- 4 - Odor	TGAI	Yes	00023955	No
63- 5 - Melting Point	TGAI	Yes	00023955	No
63- 6 - Boiling Point	N/A	N/A		No5/
63- 7 - Density, Bulk Density, or Specific Gravity	TGAI	Yes	00023955	No
63- 8 - Solubility	TGAI OR PAI	Yes	00023955	No
63- 9 - Vapor Pressure	PAI	Yes	00023955	No
63-10 - Dissociation Constant	PAI	No		Yes
63-11 - Octanol/Water Partition Coefficient	PAI	No		Yes
63-12 - pH	TGAI	N/A		No4/
63-13 - Stability	TGAI	Yes	00023955	No

TABLE A
GENERIC DATA REQUIREMENTS FOR SIMAZINE, EPA REG. NO. 100-541 (97% T)1/

Data Requirement	Composition2/	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?3/
Other Requirements:				
64- 1 - Submittal of samples	N/A	N/A		No

1/ The 97% technical (T) also serves as a manufacturing-use product.

2/ Composition: TGAI = technical grade of the active ingredient; PAI = pure active ingredient.

3/ Data must be submitted no later than six months after receipt of this guidance package.

4/ Since Simazine is practically insoluble in water no pH is required.

5/ Not required if formulation is a solid at room temperature.

N/A = Not Applicable: Data requirement is not necessary for purposes of this standard.

TABLE B
GENERIC DATA REQUIREMENTS FOR SIMAZINE, EPA REG. NO. 19713-59 (98% T)1/

Data Requirement	Composition2/	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?3/
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	TGAI	Yes	00023955 GS-650070-1 GS-650070-2 GS-650070-3 GS-650070-10	No
61-2 - Description of Beginning Materials and Manufacturing Process	TGAI	Partially	00023955 GS-650070-1 GS-650070-2 GS-650070-3	Yes
61-3 - Discussion of Formation of Impurities	TGAI	No		Yes
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	TGAI	No		Yes
62-2 - Certification of Ingredient Limits	TGAI	No		Yes
62-3 - Analytical Methods to Verify Limits	TGAI	No		Yes

TABLE B
GENERIC DATA REQUIREMENTS FOR SIMAZINE, EPA REG. NO. 19713-59 (98% T)[1]

Data Requirement	Composition[2]	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3]
158.120 Product Chemistry (continued)				
Physical and Chemical Characteristics				
63-2 - Color	TGAI	No		Yes
63-3 - Physical State	TGAI	No		Yes
63-4 - Odor	TGAI	No		Yes
63- 5 - Melting Point	TGAI	No		Yes
63- 6 - Boiling Point	TGAI	No		Yes[4]
63- 7 - Density, Bulk Density, or Specific Gravity	TGAI	No		Yes
63- 8 - Solubility	TGAI OR PAI	No		Yes
63- 9 - Vapor Pressure	PAI	No		Yes
63-10 - Dissociation Constant	PAI	No		Yes
63-11 - Octanol/Water Partition Coefficient	PAI	No		Yes
63-12 - pH	TGAI	No		No[5]
63-13 - Stability	TGAI	No		Yes

TABLE B

GENERIC DATA REQUIREMENTS FOR SIMAZINE, EPA REG. NO. 19713-59 (98% T)1/

Data Requirement	Composition2/	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?3/
158.120 Product Chemistry (Continued)				
Other Requirements:				
64- 1 - Submittal of samples	N/A	N/A	-	No

1/ The 98% technical (T) also serves as a manufacturing-use product.

2/ Composition: TGAI = technical grade of the active ingredient; PAI = pure active ingredient.

3/ Data must be submitted no later than six months after receipt of this guidance package.

4/ Not required if the 98% technical is a solid at room temperature.

5/ Since Simazine is practically insoluable in water no pH is required.

N/A = Not Applicable: Data requirement is not necessary for purposes of this standard.

TABLE C

GENERIC DATA REQUIREMENTS FOR SIMAZINE, EPA REG. NOS. 2749-292 (95% T), 1812-262 (95% T), AND 39511-5 (98% T)1/

Data Requirement	Composition2/	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?3/
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	TGAI	Yes	00023955 GS-650070-1 GS-650070-2 GS-650070-7 GS-650070-8 GS-650070-11	No
61-2 - Description of Beginning Materials and Manufacturing Process	TGAI	No		Yes
61-3 - Discussion of Formation of Impurities	TGAI	No		Yes
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	TGAI	No		Yes
Physical and Chemical Charcteristics				
63-2 - Color	TGAI	No		Yes
63-3 - Physical State	TGAI	No		Yes
63-4 - Odor	TGAI	No		Yes
63-5 - Melting Point	TGAI	No		Yes

TABLE C
GENERIC DATA REQUIREMENTS FOR SIMAZINE, EPA REG. NOS. 2749-292 (95% T), 1812-262 (95% T), AND 39511-5 (98% T)1/

Data Requirement	Composition2/	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?3/
158.120 Product Chemistry (continued)				
63- 6 - Boiling Point	TGAI	No		Yes4/
63- 7 - Density, Bulk Density, or Specific Gravity	TGAI	No		Yes
63- 8 - Solubility	TGAI OR PAI	No		Yes
63- 9 - Vapor Pressure	PAI	No		Yes
63-10 - Dissociation Constant	PAI	No		Yes
63-11 - Octanol/Water Partition Coefficient	PAI	No		Yes
63-12 - pH	TGAI	No		No5/
63-13 - Stability	TGAI	No		Yes
Other Requirements:				
64- 1 - Submittal of samples	N/A	N/A	-	No

1/ The technicals (T) also serve as manufacturing-use products.

2/ Composition: TGAI = technical grade of the active ingredient; PAI = pure active ingredient.

3/ Data must be submitted no later than six months after receipt of this guidance package.

4/ Not required if the technical products are solids at room temperature.

5/ Since Simazine is practically insoluable in water no pH is required.

N/A = Not Applicable: Data requirement is not necessary for purposes of this standard.

TABLE D

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING SIMAZINE, EPA REG. NOS. 2749-292 (95% T), 1812-262 (95% T), 39511-5 (98% T) AND 11603-11 (80% FI).

Data Requirement	Composition[1]/	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[2]/
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	MP	Yes	GS-650070-4 GS-650070-7 GS-650070-8 GS-650070-9 GS-650070-11	No
61-2 - Description of Beginning Materials and Manufacturing Process	MP	No		Yes
61-3 - Discussion of Formation of Impurities	MP	No		Yes
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	MP	No		Yes
62-2 - Certification of Ingredient Limits	MP	Partially[3]/	GS-650070-4 GS-650070-7 GS-650070-8 GS-650070-9 GS-650070-11	Yes
62-3 - Analytical Methods to Verify Certified Limits	MP	Partially	GS-650070-4 GS-650070-7 GS-650070-8 GS-650070-9 GS-650070-11	Yes

TABLE D

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING SIMAZINE, EPA REG. NOS. 2749-292 (95% T), 1812-262 (95% T), 39511-5 (98% T) AND 11603-11 (80% FI).

Data Requirement	Composition[1]/	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[2]/
158.120 Product Chemistry (continued)				
Physical and Chemical Characteristics				
63- 2 - Color	MP	No		Yes
63- 3 - Physical State	MP	No		Yes
63- 4 - Odor	MP	No		Yes
63- 7 - Density, Bulk Density, or Specific Gravity	MP	No		Yes
63-12 - pH	MP	No		No[5]/
63-14 - Oxidizing or Reducing Action	MP	No		Yes
63-15 - Flammability	MP	No		Yes
63-16 - Explodability	MP	No		Yes
63-17 - Storage Stability	MP	No		Yes
63-18 - Viscosity	MP	No		Yes[4]/
63-19 - Miscibility	MP	No		Yes[4]/
Other Requirements:				
64- 1 - Submittal of samples	N/A	N/A		No

TABLE D

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING SIMAZINE, EPA REG. NOS. 2749-292 (95% T), 1812-262 (95% T), 39511-5 (98% T) AND 11603-11 (80% FI).

158.120 Product Chemistry (continued)

1/ Composition: MP = Manufacturing-use product, T = Technical product, FI = Formulated Intermediate.

2/ Data must be submitted no later than six months after receipt of this guidance package.

3/ Nitrosamine data were submitted for the 80% FI (EPA Reg. No. 11603-11) only.

4/ Not required if the manufacturing-use products are solid at room temperature.

5/ Since Simazine is practically insoluable in water no pH is required.

N/A = Not Applicable: Data requirement is not necessary for purposes of this standard.

TABLE E

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING SIMAZINE, EPA REG. NO. 100-541 (97% T)

Data Requirement	Composition[1]	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[2]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	MP	Yes	00023955 GS-650070-1 GS-650070-2 GS-650070-5 GS-650070-6	No
61-2 - Description of Beginning Materials and Manufacturing Process	MP	Partially	00023955 GS-650070-5 GS-650070-6	Yes
61-3 - Discussion of Formation of Impurities	MP	No		Yes
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	MP	No		Yes
62-2 - Certification of Ingredient Limits	MP	Partially	00023955 GS-650070-2 GS-650070-5 GS-650070-6	Yes
62-3 - Analytical Methods to Verify Certified Limits	MP	Partially	00023955 GS-650070-2 GS-650070-5	Yes

TABLE E

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING SIMAZINE, EPA REG. NO. 100-541 (97% T)

Data Requirement	Composition[1]	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[2]
158.120 Product Chemistry (continued)				
Physical and Chemical Characteristics				
63- 2 - Color	MP	Yes	GS-650070-6	No
63- 3 - Physical State	MP	Yes	GS-650070-6	No
63- 4 - Odor	MP	Yes	GS-650070-6	No
63- 7 - Density, Bulk Density, or Specific Gravity	MP	Yes	GS-650070-6	No
63-12 - pH	MP	No		No[4]
63-14 - Oxidizing or Reducing Action	MP	No		Yes
63-15 - Flammability	MP	No		Yes
63-16 - Explodability	MP	No		Yes
63-17 - Storage Stability	MP	Yes	GS-650070-6	No
63-18 - Viscosity	N/A[3]	N/A		No
63-19 - Miscibility	N/A[3]	N/A		No
Other Requirements:				
64- 1 - Submittal of samples	N/A	N/A		No

TABLE E
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING SIMAZINE, EPA REG. NO. 100-541 (97% T)

158.120 Product Chemistry (continued)

1/ Composition: MP = Manufacturing-use product. T = Technical product.

2/ Data must be submitted no later than six months after receipt of this guidance package.

3/ Not required because the 97% technical product is solid at room temperature.

4/ Since Simazine is practically insoluable in water no pH is required.

N/A = Not Applicable: Data requirement is not necessary for purposes of this standard.

TABLE F
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING SIMAZINE, EPA REG. NO. 19713-59 (98% T)

Data Requirement	Composition1/	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?2/
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	MP	Yes	GS-650070-3 GS-650070-10	No
61-2 - Description of Beginning Materials and Manufacturing Process	MP	Partially	GS-650070-3	Yes
61-3 - Discussion of Formation of Impurities	MP	No		Yes
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	MP	No		Yes
62-2 - Certification of Ingredient Limits	MP	Partially	GS-650070-3 GS-650070-10	Yes
62-3 - Analytical Methods to Verify Certified Limits	MP	Partially	GS-650070-3	Yes
Physical and Chemical Characteristics				
63- 2 - Color	MP	No		Yes
63- 3 - Physical State	MP	No		Yes
63- 4 - Odor	MP	No		Yes

TABLE F

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING SIMAZINE, EPA REG. NO. 19713-59 (98% T)

Data Requirement	Composition1/	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?2/
158.120 Product Chemistry (continued)				
63- 7 - Density, Bulk Density, or Specific Gravity	MP	No		Yes
63-12 - pH	MP	No		No4/
63-14 - Oxidizing or Reducing Action	MP	No		Yes
63-15 - Flammability	MP	No		Yes
63-16 - Explodability	MP	No		Yes
63-17 - Storage Stability	MP	No		Yes
63-18 - Viscosity	MP	No		Yes3/
63-19 - Miscibility	MA	No		Yes3/
Other Requirements:				
64- 1 - Submittal of samples	N/A	N/A	-	No

1/ Composition: MP = Manufacturing-use product. T = Technical product.

2/ Data must be submitted no later than six month after receipt of this guidance package.

3/ Not required if the technical product is solid at room temperature.

4/ Since Simazine is practically insoluable in water no pH is required.

N/A = Not Applicable: Data requirement is not necessary for purposes of this standard.

TABLE A
GENERIC DATA REQUIREMENTS FOR SIMAZINE

Data Requirement	Composition[1]/	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[2]/
§158.125 Residue Chemistry				
171-4 - Nature of Residue (Metabolism)				
- Plants	PAIRA	Yes	00055672 GS-650070-12 GS-650070-13 GS-650070-14 GS-650070-15 GS-650070-16 GS-650070-17 GS-650070-77 GS-650070-78	No
- Livestock	PAIRA and plant metabolites	Partially	00038297 GS-650070-18 GS-650070-19 GS-650070-20 GS-650070-21 GS-650070-77 GS-650070-79 GS-650070-80 GS-650070-81 GS-650070-82	Yes[3]/

TABLE A
GENERIC DATA REQUIREMENTS FOR SIMAZINE

Data Requirement	Composition[1]/	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[2]/
§158.125 Residue Chemistry (continued)				
171-4 - Residue Analytical Method				
- Plant residues	TGAI and metabolites	Yes	GS-650070-22 GS-650070-24 GS-650070-28 GS-650070-29 GS-650070-30 GS-650070-32 GS-650070-33 GS-650070-34 GS-650070-36 GS-650070-37 GS-650070-38 GS-650070-39	No
- Animal residues	TGAI and metabolites	Yes	GS-650070-22 GS-650070-23 GS-650070-25 GS-650070-26 GS-650070-27 GS-650070-31 GS-650070-34 GS-650070-35 GS-650070-36 GS-650070-37 GS-650070-40	No
171-4 - Storage Stability Data	PAI	Partially	GS-650070-41 GS-650070-42	Yes[4]/

TABLE A
GENERIC DATA REQUIREMENTS FOR SIMAZINE

Data Requirement	Composition[1]	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[2]
§158.125 Residue Chemistry (continued)				
171-4 - Magnitude of the Residue-Residue Studies for Each Food Use				
- Grapefruit	TEP	Yes	GS-650070-43	No
- Lemons	TEP	Yes	GS-650070-44	No
- Oranges	TEP	Partially	GS-650070-45	Yes[5]
- Apples	TEP	No		Yes[6]
- Pears	TEP	Yes	GS-650070-46	No
- Cherries	TEP	Yes	GS-650070-47	No
- Peaches	TEP	No		Yes[7]
- Plums	TEP	Yes	GS-650070-48	No
- Blackberries	TEP	Yes	GS-650070-49	No
- Blueberries	TEP	Partially	GS-650070-50	Yes[8]
- Boysenberries	TEP	Yes	GS-650070-51	No
- Cranberries	TEP	Yes	GS-650070-52	No
- Currants	TEP	Yes	GS-650070-53	No
- Dewberries	TEP	Yes	GS-650070-54	No

TABLE A
GENERIC DATA REQUIREMENTS FOR SIMAZINE

Data Requirement	Composition[1]/	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[2]/
§158.125 Residue Chemistry				
171-4 - Magnitude of the Residue-Residue Studies (cont'd)				
- Grapes	TEP	Partially	GS-650070-55	Yes[9]/
- Loganberries	TEP	Yes	GS-650070-56	No
- Raspberries	TEP	Partially	GS-650070-57	Yes[10]/
- Strawberries	TEP	N/A		No[11]/
- Almonds	TEP	Yes	GS-650070-58	No
- Filberts	TEP	Yes	GS-650070-59	No
- Macadamia Nuts	TEP	Yes	GS-650070-60	No
- Pecans	TEP	Yes	GS-650070-61	No[12]/
- Walnuts	TEP	Yes	GS-650070-62	No
- Corn	TEP	No[25]/		Yes[13]/
- Corn Forage and Fodder (Field & Sweet Corn)	TEP	No[25]/		Yes[14]/
- Bermuda grass	TEP	Partially	GS-650070-63	Yes[15]/
- Grasses	TEP	Partially	GS-650070-64	Yes[16]/
- Alfalfa	TEP	No		Yes[17]/

TABLE A
GENERIC DATA REQUIREMENTS FOR SIMAZINE

Data Requirement	Composition[1]/	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[2]/
§158.125 Residue Chemistry				
171-4 - Magnitude of the Residue-Residue Studies (cont'd)				
- Artichokes	TEP	Partially	GS-650070-65	Yes[18]/
- Asparagus	TEP	Partially	GS-650070-66	Yes[19]/
- Avocados	TEP	Partially	GS-650070-67	Yes[20]/
- Bananas	TEP	Yes	GS-650070-68	No
- Olives	TEP	Partially	GS-650070-69	Yes[21]/
- Sugarcane	TEP	Partially	GS-650070-70 GS-650070-71	Yes[22]/
- Potable Water	EP	No		Yes[23]/
- Fish	TGAI	Yes	GS-650070-72 GS-650070-73	No
- Meat, Milk, Poultry, and Eggs	TGAI	Partially	GS-650070-74 GS-650070-75 GS-650070-76	Yes[24]/

1/ Composition: TGAI = Technical grade of the active ingredient; PAIRA = Pure active ingredient, radiolabelled; PAI = Pure active ingredient, TEP = Typical end-use product, EP = End-use product, N/A = Not Applicable.

2/ Data must be submitted no later than four years after receipt of this guidance package.

3/ Additional data required: Studies which elucidate the metabolism of simazine and its chlorometabolites G-28273 and G-28279 in poultry (including eggs) and ruminants (including milk); if the metabolism of simazine and its chlorometabolites in poultry or ruminants is found to differ significantly from that in rats, a non-ruminant (swine) study will also be required.

4/ Additional data required: (a) Data demonstrating the stability of simazine and its metabolites G-28273 and G-28279 in or on plant samples stored at freezing temperatures for intervals up to about one year, since samples are stored for this length of time prior to analysis. (b) Data demonstrating the stability of simazine metabolites G-28273 and G-28279 in or on fish and mammalian samples stored at freezing temperatures for intervals up to about one year, since samples are stored for this length of time prior to analysis.

5/ Additional data required: (a) A single application with one of the WP formulations at test locations in FL, TX, and CA or AZ. Residues of simazine and metabolites G-28273 and G-28279 in or on whole oranges must be determined. (b) If residues are found in whole oranges, then a fractionation study will be required to determine residues in dried pulp, peel, oil, molasses, and juice.

6/ Data required: (a) A single directed application with one of the WP formulations at 4 lb. ai/A at test sites located in NY, MI, and WA. Residues of simazine and metabolites G-28273 and G-28279 in or on apples must be determined. (b) If residues are found in apples, then a processing study is required to determine residues in pomace (wet and dry) and juice.

7/ Data required: A single directed-spray application with one of the WP formulations at 4 lb. ai/A at test sites located in CA, TX, MO, and representative production areas east of the Mississippi River, including SC or GA. Residues of simazine and metabolites G-28273 and G-28279 must be determined in peaches.

8/ Additional data required: A single directed application with one of the WP formulations at 4 lb. ai/A at test sites located in MI, NJ, and ME. Residues of simazine and metabolites G-28273 and G-28279 in or on blueberries must be determined.

9/ Additional data required: (a) A single directed-spray application with one of the WP formulations at 4.8 lb. ai/A at test sites in CA, MI, and NY. Residues of simazine and metabolites G-28273 and G28279 in or on grapes must be determined. (b) If residues are detected in or on grapes then residues in juice, raisins and raisin waste, and pomace (wet and dry) must be determined.

10/ A single directed application with one of the WP formulations at 4 lb. ai/A at test sites in OR and WA. Residues of simazine and metabolites G-28273 and G-28279 in or on raspberries must be determined.

11/ Data requirements for tolerance waived for strawberries, because the maximum registered application rate is considerably less when compared with most other group members.

12/ Tolerance established at 0.1 ppm. No additional data are required for this commodity.

13/ Corn, fresh (including sweet corn kernels plus cobs with husks removed) and corn grain. Additional data required: (a) Single aerial or ground applications of either the 4 lb./gal. fluid concentrate or one of the WP formulations at 4 lb. ai/A. Residues of simazine and metabolites G-28273 and G-28279 must be determined in fresh corn and corn grain. (b) If residues are found in grain, then a fractionation study is required to determine residues in corn oil (crude and refined), milled products, and cannery waste (sweet corn only).

14/ Additional data required: Single aerial or ground applications of either the 4 lb./gal fluid concentrate or one of the WP formulations at 4 lb. ai/A. Residues of simazine and metabolites G-28273 and G-28279 must be determined in corn forage and fodder.

15/ Additional data required: Residues of intact simazine and its metabolites G-28273 and G-28279 must be determined in Bermuda grass forage and hay following postemergence applications of one of the WP formulations. Forage must be sampled 30 and 50 days following applications made at 2.4 and 3.2 lb. ai/A, respectively; hay must be sampled at 60 and 90 days, respectively.

16/ Additional data required: Residues of intact simazine and its metabolites G-28273 and G-28279 must be determined on forage and hay of orchard grass and tall fescue following postemergence applications of one of the WP formulations at 2 lb. ai/A; forage and hay must be sampled 30 and 60 days

17/ Data required: (a) Residues of intact simazine and its metabolites G-28273 and G-28279 must be determined in or on seed, forage and hay of alfalfa following applications of one of the WP formulations at 1.6 lb. ai/A; forage and hay must be sampled 30 and 60 days following treatment, respectively. (b) If detectable residues are found in alfalfa seed, a processing study will be required to determine residues occurring in meal.

18/ Additional data required: A single directed spray application with one of the WP formulations at 4 lb. ai/A. Residues of simazine and metabolites G-28273 and G-28279 in or on artichokes must be determined.

19/ Additional data required: A single directed application with one of the WP formulations at 4 lb. ai/A; sampling intervals should include 0, 3, 7 and 10 days posttreatment. Residues of simzaine and metabolites G-28273 and G-28279 in or on asparagus must be determined. Test locations should include CA, MI, and WA.

20/ Additional data required: A single directed application (broadcast or band) with one of the WP formulations at 4 lb. ai/A at test sites located in CA. Residues of simazine and metabolites G-28273 and G-28279 in or on avocados must be determined.

21/ Additional data required: (a) A single directed application with one of the WP formulations at 4 lb. ai/A. Residues of simazine and its metabolites G-28273 and G-28279 in or on olives must be determined. (b) If residues are found in olives, then a processing study will be required to determine residues in olive oil.

22/ Additional data required: (a) A single preemergence and at least two postemergence (one must be broadcast over the crop) treatments with one of the WP formulations at 4 lb. ai/A application at an interval schedule setting the final postemergence application just prior to close-in (3.5 months before harvest). Residues of simazine and its metabolites G-28273 and G-28279 in or on sugarcane and sugarcane fodder must be determined. To insure adequate geographic representation, tests should be conducted in Fl and LA. (b) If residues are found in sugarcane, then a processing study will be required for molasses, sugar, and bagasse.

23/ See Agency's revised policy on pesticide residues in drinking water published in Federal Register Vol. 47, No. 115, June 15, 1982, Proposed Rules.

24/ Additional data required: (a) A feeding study with poultry fed simazine per se and its two chlorometabolites individually at levels of 1x, 3x and 10x the highest expected dietary intake by poultry. (Appropriate dosage levels for feeding of metabolites connot be determined until sufficient metabolite residue data for feed items have been received.) In this study tissues and eggs must be analyzed for simazine per se, its two chloroplant-metabolites, and any signficant animal metabolites found in the poultry metabolism study requested under "Nature of the Residues in Animals." (b) Depending upon the results of the requested animal metabolism study with ruminants, a feeding study with ruminants may be needed where animals are fed the two chlorometabolites individually at levels of 1x, 3x and 10x the highest expected dietary intake by ruminants. In this feeding study, residue levels of simazine plant and animal metabolites of toxicological concern (if present as determined by the ruminant metabolism study) must be determined in the milk, fat, meat and meat byproducts of ruminants.

25/ Sufficient data are not available to assess the adequacy of the tolerances in covering residues resulting from the maximum registered rate in label directions. The methodolgy used is not adequate for corn analyses due to the high, yet inconsistent, background levels observed in check samples.

TABLE A
GENERIC DATA REQUIREMENTS FOR SIMAZINE

Data Requirement	Composition[1]/	Use [2]/ Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3]/
158.130 Environmental Fate					
DEGRADATION STUDIES-LAB:					
161-1 - Hydrolysis	TGAI or PAIRA	A,B,D,G,H	Yes	00027856	No
Photodegradation					
161-2 - In Water	TGAI or PAIRA	A,B,D,G	No		Yes [17]/
161-3 - On Soil	TGAI or PAIRA	A[4]/ G	No		Yes [17]/
161-4 - In Air	TGAI or PAIRA	A	N/A		No [5]/
METABOLISM STUDIES-LAB:					
162-1 - Aerobic Soil	TGAI or PAIRA	A,B,G,H	Partially	00027881 00040664 00027862	Yes[6]/[16]/
162-2 - Anaerobic Soil	TGAI or PAIRA	A	Yes	00027857	No
162-3 - Anaerobic Aquatic	TGAI or PAIRA	D,G	No		Yes
162-4 - Aerobic Aquatic	TGAI or PAIRA	D	No		Yes
MOBILITY STUDIES:					
163-1 - Leaching and Adsorption/Desorption	TGAI or PAIRA	A,B,D,G,H	Partially	00001450 00044017 00027134	Yes[7]/[17]/
163-2 - Volatility (Lab)	TEP	A	N/A		No[5]/
163-3 - Volatility (Field)	TEP	A	N/A		No[5]/

TABLE A

GENERIC DATA REQUIREMENTS FOR SIMAZINE

Data Requirement	Composition[1/]	Use [2/] Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3/]
158.130 Environmental Fate (Continued)					
DISSIPATION STUDIES-FIELD:					
164-1 - Soil	TEP	A,B,H	Partially	00027859 00065585	Yes[8/16/]
164-2 - Aquatic	TEP	D	Partially	00025413 00023992 00025412	Yes[9/]
164-3 - Forestry	TEP	G	No		Yes
164-4 - Combination and Tank Mixes	TEP	N/A	N/A		No[10/]
164-5 - Soil, Long-term	TEP	A	No		Yes[11/]
ACCUMULATION STUDIES:					
165-1 - Rotational Crops (Confined)	PAIRA	A	No		Yes[12/]
165-2 - Rotational Crops (Field)	TEP	A	No		Yes[12/]
165-3 - Irrigated Crops	TEP	A	No		Yes[13/]
165-4 - In Fish	TGAI or PAIRA	A,B,D,G	Yes	00043668 00043670 00023366	No
165-5 - In Aquatic Non-Target Organisms	TEP	D,G	Yes	00027984 00025444 00027983 00027985 00034709	No[15/]
Subpart K Re-entry	N/A	N/A	No		No[14/]

1/ Composition: TGAI = Technical grade of the active ingredient; PAIRA = Pure active ingredient, radiolabelled; TEP = Typical end-use product. N/A = Not Applicable.

2/ The use patterns are coded as follows: A=Terrestrial, Food Crop; B=Terrestrial, Non-Food; C=Aquatic, Food Crop; D=Aquatic, Non-Food; E=Greenhouse, Food Crop; F=Greenhouse, Non-Food; G=Forestry; H=Domestic Outdoor; I=Indoor.

3/ Data must be submitted no later than Four years after receipt of this guidance package.

4/ Data are required to support uses where simazine is not soil incorporated.

5/ Data are not required because of the low vapor pressure of simazine.

6/ Data are needed for incubation periods of up to one year to fully delineate the patterns of formation and decline of simazine degradates and to identify any additional products which may form.

7/ Data are needed on the leaching of simazine soil degradation products including adsorption/desorption studies.

8/ Data are required on the dissipation of simazine products representing each formulation category and the formation and decline of degradates in soils treated at maximum label rates to support each use and major geographical use area. Data on the dissipation of simazine in silt loam (NE, NY, OH) and fine sandy loam (CA) applied as wettable powder (WP) or soluable concentrate/liquid (SC/L) (NE) are acceptable.

9/ Data on the dissipation of simazine in pond water in New York and Nebraska are acceptable. Additional data are required on the dissipation of simazine in the soil/sediment phase of the aquatic environment, and on the formation and decline of degradates in the aquatic environment. Data are also needed to support all other aquatic and aquatic impact use including but not limited to drainage ditch banks, swimming pools and cooling water systems.

10/ Data requirements for combinations and tank mixes are not necessary for the purposes of this standard.

11/ Data are required to support uses on field or vegetable crops if data from 162-1 or 164-1 indicate that 50% dissipation of residues will not occur before a subsequent application to the same use site.

12/ For crops rotated on treated areas either of the following will apply: (a) A tolerance must be obtained for the rotated crop. (b) Data must be provided to determine time intervals at which crops planted on treated areas will be free of pesticide residues.

13/ In instances where water from treated drainage ditches or flood irrigated orchards becomes contaminated with pesticide residues, any one of the following will apply: (a) A tolerance must be obtained for any crop exposed to contaminated water. (b) The product label must include a restriction against the use of water containing pesticide residues on crops grown for food or feed. (c) Data must be provided to demonstrate conditions under which drainage water from treated drainage ditches or flood irrigated orchards can be used on crops without resulting in illegal plant residues.

14/ Not applicable. Data to support the establishment of reentry protection standards are not required because the Agency has determined, based on use patterns and available toxicology data for simazine that the criteria in §158.140 are not met.

15/ Additional data are not required since laboratory studies indicate that simazine does not accumulate significantly in fish tissue.

16/ Data must be submitted no later than two years after receipt of this guidance package.

17/ Data must be submitted no later than six months after receipt of this guidance package.

N/A = Not Applicable: Data requirement is not necessary for purposes of this standard.

TABLE A
GENERIC DATA REQUIREMENTS FOR SIMAZINE

Data Requirement	Composition[1]/	Use Pattern[2]/	Does EPA Have Data to Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data be Submitted Under FIFRA Section 3(c)(2)(B)?[3]/
§158.135 Toxicology					
ACUTE TESTING					
81-1 - Oral LD_{50}- Rat	TGAI	A B C D H	Yes	GS-650070-83	No
81-2 - Dermal LD_{50}	TGAI	A B C D H	YES	00023965	No
81-3 - Inhalation LC_{50}- Rat	TGAI	A B C D H	No		Yes
81-4 - Primary Skin Irritation	TGAI	A B C D H	Yes	00023965	No
81-5 - Primary Eye Irritation	TGAI	A B C D H	Yes	00023965	No
81-7 - Acute Delayed Neurotoxicity - Hen			N/A		No
SUBCHRONIC TESTING					
82-1 - 90 Day Feeding Rodent, Non-Rodent	TGAI	A B C D H	NO		YES[4]/
82-2 - 21 Day Dermal	TGAI	A B C D H	Yes	00057567	No
82-3 - 90 Day Dermal			N/A		No
82-4 - 90 Day Inhalation - Rat			N/A		No
82-5 - 90 Day Neurotoxicity - Hen/Mammal			N/A		No

TABLE A
GENERIC DATA REQUIREMENTS FOR SIMAZINE

Data Requirement	Composition[1]/	Use Pattern[2]/	Does EPA Have Data to Satisfy This Requirement (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3]/
§158.135 Toxicology (Continued)					
CHRONIC TESTING					
83-1 - Chronic Toxicity - 2 species: Rodent and Non-Rodent	TGAI	A B C D H	No		Yes
83-2 - Oncogenicity Study - 2 Species: Rat and Mouse Preferred	TGAI	A B C D H	No		Yes
83-3 - Teratogenicity - 2 Species	TGAI	A B C D H	No		Yes
83-4 - Reproduction - 2 - Generation	TGAI	A B C D H	Yes (Rat)	00023365 00080631	No

TABLE A
GENERIC DATA REQUIREMENTS FOR SIMAZINE

Data Requirement	Composition[1]	Use Pattern[2]	Does EPA Have Data To Satisfy This Requirement (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3]
§158.135 Toxicology (Continued)					
MUTAGENICITY TESTING					
84-2 - Gene Mutation	TGAI	A B C D H	No		Yes
84-2 - Chromosomal Aberration	TGAI	A B C D H	No		Yes
84-2 - Other Mechanisms Of Mutagenicity	TGAI	A B C D H	No		Yes
SPECIAL TESTING					
85-1 - General Metabolism	PAI or PAIRA	A B C D H	Partially	00080633, 00080635, 00080632	Yes[4]
85-2 - Domestic Animal Safety			N/A		No

1/ Composition: TGAI = Technical grade of active ingredient; PAI = Pure active ingredient; PAIRA = Pure active ingredient, radiolabelled; CHOICE = Choice of several test substances determined on a case-by-case basis.

2/ The use patterns are coded as follows: A = Terrestrial, Food Crop; B = Terrestrial, Non-Food; C = Aquatic, Food Crop; D = Aquatic, Non-Food; E = Greenhouse, Food Crop; F = Greenhouse, Non-Food; G = Forestry; H = Domestic Outdoor; I = Indoor.

3/ Data must be submitted no later than six months for acute data, and 48 months for remainder of data except for data in response to the previously issued Data Call-In Notice, 90 Day Feeding Rodent and Non-Rodent, and General Metabolism.

4/ Data must be submitted no later than one year after receipt of this guidance package.

N/A = Not Applicable: Data requirement is not necessary for purposes of this standard.

WILDLIFE AND AQUATIC ORGANISMS
TABLE A
GENERIC DATA REQUIREMENTS FOR SIMAZINE

Data Requirement	Composition 1/	Use 2/ Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?3/
§158.145 Wildlife and Aquatic Organisms					
AVIAN AND MAMMALIAN TESTING					
71 - 1 - Avian Oral LD$_{50}$	TGAI	A,B,D,G	Yes	00072798*	No
71 - 2 - Avian Dietary LC$_{50}$	TGAI	A,B,D4/,G	Yes	00043678* 00034769** 00043672** GS-650070-84**	No
71 - 3 - Wild Mammal Toxicity	TGAI	N/A	N/A		No
71 - 4 - Avian Reproduction	TGAI	B	Partially5/	00043678*	Yes
71 - 5 - Simulated and Actual Field Testing - Mammals and Birds		N/A	N/A		No
AQUATIC ORGANISM TESTING					
72 - 1 - Freshwater Fish LC$_{50}$	TGAI TEP	A,B,G, D	Yes Partially6/	00043666* 00043668** 00025438* 00033309** 00026299** 00034214**	No Yes
72 - 2 - Acute LC$_{50}$ Freshwater Invertebrates	TGAI TEP	A,B,G, D	Yes Yes	GS-650070-85** 00043676*	No No

WILDLIFE AND AQUATIC ORGANISMS
TABLE A
GENERIC DATA REQUIREMENTS FOR SIMAZINE

Data Requirement	Composition 1/	Use 2/ Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?3/
§158.145 Wildlife and Aquatic Organisms (continued)					
72 - 3 - Acute LC_{50} Estuarine and Marine Organisms	TGAI	A,B,G	Yes	00023331* 00043667** 00043677**	No
72 - 4 - Fish Early Life Stage and Aquatic Invertebrate Life-Cycle	TGAI	B,D	Yes	00043676*	No
72 - 5 - Fish - Life-Cycle			N/A		No
72 - 6 - Aquatic Organism Accumulation			N/A		No
72 - 7 - Simulated or Actual Field Testing - Aquatic Organisms	TEP	B,D	Partially	00025433**	No11/

WILDLIFE AND AQUATIC ORGANISMS
TABLE A
GENERIC DATA REQUIREMENTS FOR SIMAZINE

Data Requirement	Composition 1/	Use 2/ Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)? 3/
§158.155 Nontarget Insect					
NONTARGET INSECT TESTING - POLLINATORS:					
141 - 1 - Honey bee acute contact LD_{50}	TGAI	A,B	Yes	00036935*	No
141 - 2 - Honey bee - toxicity of residues on foliage	TEP	A,B	No		No 9/
141 - 3 - Wild bees important in alfalfa pollination - toxicity of residues on foliage	TEP	A,B	No		No 10/
141 - 4 - Honey bee subacute feeding study	[Reserved] 7/				
141 - 5 - Field testing for pollinators	TEP	A,B	No		No 9/

WILDLIFE AND AQUATIC ORGANISMS
TABLE A
GENERIC DATA REQUIREMENTS FOR SIMAZINE

Data Requirement	Composition 1/	Use 2/ Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?3/
§158.155 Nontarget Insect (continued)					
NONTARGET INSECT TESTING - AQUATIC INSECTS:					
142 - 1 - Acute toxicity to aquatic insects	[Reserved]8/				
142 - 2 - Aquatic Insect life-cycle study	[Reserved]8/				
142 - 3 - Simulated or actual field testing for aquatic insects	[Reserved]8/				
143 - 1 thru 143 - 3 - NONTARGET INSECT TESTING - PREDATORS AND PARASITES	[Reserved]8/				

1/ Composition: TGAI = Technical grade of the active ingredient; TEP = Typical end-use product.

2/ The use patterns are coded as follows: A = Terrestrial, Food Crop; B = Terrestrial, Non-Food; C = Aquatic Food Crop; D = Aquatic, Non-Food; E = Greenhouse, Food Crop; F = Greenhouse, Non-Food; G = Forestry; H = Domestic Outdoor; I = Indoor.

3/ Data must be submitted no later than four years after receipt of the guidance package.

4/ Cooling tower use requires only one dietary study.

5/ One study (waterfowl) was submitted, another reproductive study is needed (upland gamebird). The waterfowl study may need to be repeated pending results of the upland gamebird study.

6/ One study (warmwater species) was submitted; another is required on a coldwater species.

7/ [Reserved] Requirement reserved pending development of test methodology.

8/ [Reserved] Pending decision as to whether data requirement should be established.

9/ As first tier (acute contact) test indicated low toxicity to honey bees, further testing is not required.

10/ Required only when product is intended for foliar application to seed alfalfa.

11/ These field studies are not presently required, but could be based on the results of formulated product testing.

N/A = Not Applicable: Data requirement is not necessary for purposes of this standard.

* = Study can stand alone to fulfill guideline requirements.

** = Study does not fulfill data requirements and must be cited in conjunction with other studies to fulfill data requirements.

III. REQUIREMENT FOR SUBMISSION OF PRODUCT-SPECIFIC DATA

Note: This chapter applies only to manufacturing-use products, not end-use products.

A necessary first step in determining which statements must appear on your product's label is the completion and submission to EPA of product-specific data* listed on the form entitled "Product Specific Data Report" (EPA Form 8580-4, Appendix III-1) to fill "gaps" identified by EPA concerning your product. Under the authority of FIFRA Section 3(c)(2)(B), EPA has determined that you must submit these data to EPA in order to register or reregister your product(s). All of these data must be submitted not later than six months after you receive this guidance document.

"Product-Specific Data Requirements for Manufacturing-Use Products" appearing in Table B permit you to determine which product specific data you must submit. This can be done by examining the entries in the column of those tables entitled "Must Data Be Submitted Under §3(c)(2)(B)."

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*/ Product specific data pertains to data that support the formulation which is marketed; it usually includes product chemistry data and acute toxicology data.

IV. SUBMISSION OF REVISED LABELING AND PACKAGING INFORMATION

Note: This chapter applies only to manufacturing-use products, not end-use products.

The Agency requires applicants for registration or reregistration to ensure that each label (1) contains accurate, complete, and sufficient instructions and precautions, reflecting the results of data concerning the product and its ingredients, and (2) incorporates labeling format and terminology which are sufficiently standardized to avoid user confusion.

As part of your application, you will be required to submit draft labeling consistent with: applicable product-specific data; the precautionary statements and use directions; and the regulations concerning classification [40 CFR S162.11(c)], packaging [40 CFR S162.16], and labeling [40 CFR S162.10, Appendix IV-1 an IV-2], as indicated by the following paragraphs of this chapter of the guidance document.

You will be informed later when you must submit the revised labeling set forth in this guidance package.

A. Label Contents

40 CFR S162.10 (Appendix IV-1) requires that certain specific labeling statements must appear at certain locations on the label. This is referred to as format labeling. Specific label items listed below are keyed to Tables D, E, and F (Appendix IV-2).

Item 1. PRODUCT NAME - The name, brand, or trademark is required to be located on the front panel, preferably centered in the upper part of the panel. The name of a product will not be accepted if it is false or misleading. See Appendix IV-1. [40 CFR S162.10(b)]

Item 2. COMPANY NAME AND ADDRESS - The name and address of the registrant or distributor is required on the label. The name and address should preferably be located at the bottom of the front panel or at the end of the label text. See Appendix IV-1. [40 CFR S162.10(c)]

Item 3. NET CONTENTS - A net content statement is required on all labels. The preferred location is the bottom of the front panel immediately above the company name and address, or at the end of the label text. The net contents must be stated in terms of weight, expressed as avoirdupois pounds and ounces, and stated in terms of the largest suitable unit, i.e., "1 pound 10 ounces" rather than "26 ounces." In addition to the required units specified, net contents may be expressed in metric units. See Appendix IV-1. [40 CFR §162.10(d)]

Item 4. EPA REGISTRATION NUMBER - The registration number assigned to the pesticide product must appear on the label, preceded by the phrase "EPA Registration No.," or "EPA Reg. No." The registration number must be set in type of a size and style similar to other print on that part of the label on which it appears and must run parallel to it. The registration number and the required identifying phrase must not appear in such a manner as to suggest or imply recommendation or endorsement of the product by the Agency. See Appendix IV-1. [40 CFR §162.10(e)]

Item 5. EPA ESTABLISHMENT NUMBER - The EPA establishment number, preceded by the phrase "EPA Est." is the final establishment at which the product was produced, and may appear in any suitable location on the label or immediate container. It must also appear on the wrapper or outside container of the package if the EPA establishment registration number on the immediate container cannot be clearly read through such wrapper or container. See Appendix IV-1. [40 CFR §162.10(f)]

Item 6. INGREDIENT STATEMENT - An ingredient statement is required on the front panel and must contain the name and percentage by weight of each active ingredient and the total percentage by weight of all inert ingredients. The preferred location is immediately below the product name. The ingredient statement must run parallel with, and be clearly distinguished from, other text on the panel. It must not be placed in the body of other text. See Appendix IV-1. [40 CFR 162.10(g)]

Item 6A. POUNDS PER GALLON STATEMENT - For liquid agricultural formulations, the pounds per gallon of active ingredient must be indicated on the label.

Item 7. FRONT LABEL PRECAUTIONARY STATEMENTS - All labels are required to have precautionary statements grouped together on the front panel, preferably within a block outline. The table below shows the minimum type size requirements on various size labels, as set forth in the Regulations.

Size of Label on Front Panel in Square Inches	Signal Word as Required Minimum Type Size All Capitals	"Keep Out of Reach of Children" as Required
5 and under	6 point	6 point
above 5 to 10	10 point	6 point
above 10 to 15	12 point	8 point
above 15 to 30	14 point	10 point
over 30	18 point	12 point

Item 7A. CHILD HAZARD WARNING STATEMENT - All labels are required to have the statement "Keep Out of Reach of Children" located on the front panel above the signal word except where contact with children during distribution or use is unlikely. See Appendix IV-1. [40 CFR §162.10(h)(1)(ii)]

Item 7B. SIGNAL WORD - The signal word (Caution, Warning, or Danger) is required on the front panel immediately below the child hazard warning statement. See Appendix IV-1. [40 CFR §162.10 (h)(1)(i)]

Item 7C. SKULL & CROSSBONES AND WORD "POISON" - On products assigned a toxicity Category I on the basis of oral, inhalation, or dermal toxicity, the word "Poison" shall appear on the label in red on a background of distinctly contrasting color and the skull and crossbones shall appear in immediate proximity to the word poison. See Appendix IV-1. [40 CFR §162.10(h)(1)(i)]

Item 7D. STATEMENT OF PRACTICAL TREATMENT - A statement of practical treatment (first aid or other) shall appear on the label of pesticide products in toxicity Categories I, II, and III. See Appendix IV-1. [40 CFR §162.10(h)(1)(iii)]

Item 7E. REFERRAL STATEMENT - The statement "See Side (or Back) Panel for Additional Precautionary Statements" is required on the front panel for all products, unless all required precautionary statements appear on the front panel. See Appendix IV-1. [40 CFR §162.10(h)(1)(iii)]

Item 8. SIDE/BACK PANEL PRECAUTIONARY LABELING - The precautionary statements as listed below must appear together on the label under the heading "PRECAUTIONARY STATEMENTS." The preferred location is at the top of the side or back panel preceding the directions for use, and it is preferred that these statements be surrounded by a block outline. Each of the three hazard warning statements must be headed by the appropriate hazard title. See Appendix IV-1. [40 CFR §162.10 (h)(2)]

Item 8A. HAZARD TO HUMANS AND DOMESTIC ANIMALS - Where a hazard exists to humans or domestic animals, precautionary statements are required indicating the particular hazard, the route(s) of exposure and the precautions taken to avoid accident, injury or damage. See Appendix IV-1. [40 CFR §162.10 (h)(2)(i)]

Item 8B. ENVIRONMENTAL HAZARD - Where a hazard exists to non-target organisms excluding humans and domestic animals, precautionary statements are required stating the nature of the hazard and the appropriate precautions to avoid potential accident, injury, or damage. See Appendix IV-1. [40 CFR §162.10(h)(2)(ii)]

Item 8C. PHYSICAL OR CHEMICAL HAZARD

1. Flammability statement. Precautionary statements relating to flammability of a product are required to appear on the label if it meets the criteria in Appendix IV-3. The requirement is based on the results of the flashpoint determinations and flame extension tests required to be submitted for all products. These statements are to be located in the side/back panel precautionary statements section, preceded by the heading "Physical/Chemical Hazards." Note that no signal word is used in conjunction with the flammability statements.

2. Criteria for declaration of non-flammability. The following criteria will be used to determine if a product is non-flammable:

   a. A "non-flammable gas" is a gas (or mixture of gases) that will not ignite when a lighted match is placed against the open cylinder valve.

   b. A "non-flammable liquid" is one having a flashpoint greater than 350°F (177°C) as determined by the method specified in 40 CFR §163.61-8(c)(13)(ii) of Subpart D.

   c. A "non-flammable aerosol" is one which meets the following criteria:

      i. The flame extension is zero inches, using the method specified in 40 CFR §163.61-8(c)(13)(ii);

      ii. There is no flash back; and

      iii. The flashpoint of the non-volatile liquid component is greater than 350°F (177°C), determined by the method specified in 40 CFR §163.61-8(c)(13)(i).

3. Declaration of non-flammability. Products which meet the criteria for non-flammability specified above may bear the notation "non-flammable" or "nonflammable (gas, liquid, etc.)" on the label.

   It may appear as a substatement to the ingredients statement, or on a back or side panel, but shall not be highlighted or emphasized (as with an inordinately large type size) in any way that may detract from precaution.

4. Other physical/chemical hazard statements. When chemistry data submitted in accordance with 40 CFR §163.61-10(c) demonstrate hazards of a physical or chemical nature other than flammability, appropriate statements of hazard will be prescribed. Such statements may address hazards of explosivity, oxidizing or reducing capability, or mixing with other substances to produce toxic fumes.

Item 9. MISUSE STATEMENT - The following statement is required on your label: "It is a violation of Federal law to use this product in a manner inconsistent with its labeling." See Appendix IV-1. [40 CFR §162.10(1)(2)(ii)]

Item 10A. STORAGE AND DISPOSAL BLOCK - All labels are required to bear storage and disposal statements. These statements are developed for specific containers, sizes, and chemical content. Make certain that the statement you use pertains specifically to your product. These instructions must be grouped and appear under the heading "Storage and Disposal" in the directions for use. This heading must be set in the same type sizes as required for the child hazard warning. Refer to Appendix IV-5 for the latest specific storage and disposal product label statements.

Item 10B. DIRECTIONS FOR USE - Directions for use must be stated in terms which can be easily read and understood by the average person likely to use or to supervise the use of the pesticide. When followed, directions must be adequate to protect the public from fraud and from personal injury and to prevent unreasonable adverse effects on the environment. See Appendix IV-1. [40 CFR §162.10]

B. Collateral Information

Bulletins, leaflets, circulars, brochures, data sheets, flyers, and other graphic printed matter which is referred to on the label or which is to accompany the product are termed collateral labeling. Such labeling may not bear claims or representations that differ in substance from those accepted in connection with registration of the product. It should be made part of the response to this notice and submitted for review.

V. INSTRUCTIONS FOR SUBMISSION

All applications prepared in response to this Notice should be addressed as follows:

[Product Manager] PM-23
Phone No. (703) 557-1830
Registration Division (TS-767)
Office of Pesticide Programs
Environmental Protection Agency
Washington, D.C. 20460

For each product for which continued registration is desired:

1. Within 90 days from receipt of this document, you must submit the "FIFRA Section 3(c)(2)(B) Summary Sheet" EPA Form 8580-1. Refer to Appendix II-2 with appropriate attachments.

2. Within 6 months from receipt of this document registrants must submit:

    a. Confidential Statement of Formula, EPA Form 8570-4.

    b. Product Specific Data Report, EPA Form 8580-4 (Appendix III-1).

    c. Two copies of any required product-specific data.

3. Within the time set forth in Table A, all generic data must be submitted by the affected registrant(s).

Note: If for any reason any required test is delayed or aborted so that meeting the agreed submission time will be delayed, notify the Product Manager listed above.

You will be informed at a later date when you must submit your Application for Amended Pesticide Registration (EPA Form 8570-1) and the revised labeling set forth in this guidance package.

Guide to Use of This Bibliography

1. CONTENT OF BIBLIOGRAPHY. This bibliography contains citations of all studies considered relevant by EPA in arriving at the positions and conclusions stated elsewhere in the Standard. Primary sources for studies in this bibliography have been the body of data submitted to EPA and its predecessor agencies in support of past regulatory decisions. Selections from other sources including the published literature, in those instances where they have been considered, will be included.

2. UNITS OF ENTRY. The unit of entry in this bibliography is called a "study." In the case of published materials, this corresponds closely to an article. In the case of unpublished materials submitted to the Agency, the Agency has sought to identify documents at a level parallel to the published article from within the typically larger volumes in which they were submitted. The resulting "studies" generally have a distinct title (or at least a single subject), can stand alone for purposes of review, and can be described with a conventional bibliographic citation. The Agency has attempted also to unite basic documents and commentaries upon them, treating them as a single study.

3. IDENTIFICATION OF ENTRIES. The entries in this bibliography are sorted numerically by "Master Record Identifier," or MRID, number. This number is unique to the citation, and should be used at any time specific reference is required. It is not related to the six-digit "Accession Number" which has been used to identify volumes of submitted studies; see paragraph 4(d)(4) below for a further explanation. In a few cases, entries added to the bibliography late in the review may be preceded by a nine-character temporary identifier. These entries are listed after all MRID entries. This temporary identifier number is also to be used whenever specific reference is needed.

4. FORM OF ENTRY. In addition to the Master Record Identifier (MRID), each entry consists of a citation containing standard elements followed, in the case of material submitted to EPA, by a description of the earliest known submission. Bibliographic conventions used reflect the standards of the American National Standards Institute (ANSI), expanded to provide for certain special needs.

   a. Author. Whenever the Agency could confidently identify one, the Agency has chosen to show a personal author. When no individual was identified, the Agency has shown an identifiable laboratory or testing facility as author. As a last resort, the Agency has shown the first submitter as author.

b. Document Date. When the date appears as four digits with no question marks, the Agency took it directly from the document. When a four-digit date is followed by a question mark, the bibliographer deduced the date from evidence in the document. When the date appears as (19??), the Agency was unable to determine or estimate the date of the document.

c. Title. In some cases, it has been necessary for Agency bibliographers to create or enhance a document title. Any such editorial insertions are contained between square brackets.

d. Trailing Parentheses. For studies submitted to the Agency in the past, the trailing parentheses include (in addition to any self-explanatory text) the following elements describing the earliest known submission:

(1) Submission Date. The date of the earliest known submission appears immediately following the word "received."

(2) Administrative Number. The next element, immediately following the word "under," is the registration number, experimental use permit number, petition number, or other administrative number associated with the earliest known submission.

(3) Submitter. The third element is the submitter, following the phrase "submitted by." When authorship is defaulted to the submitter, this element is omitted.

(4) Volume Identification (Accession Numbers). The final element in the trailing parentheses identifies the EPA accession number of the volume in which the original submission of the study appears. The six-digit accession number follows the symbol "CDL," standing for "Company Data Library." This accession number is in turn followed by an alphabetic suffix which shows the relative position of the study within the volume. For example, within accession number 123456, the first study would be 123456-A; the second, 123456-B; the 26th, 123456-Z; and the 27th, 123456-AA.

00001450 Helling, C.S.; Turner, B.C. (1968) Pesticide mobility: Determination by soil thin-layer chromatography. Method dated Nov 1, 1968. Science 162(?/Nov):562-563. (Also In unpublished submission received Feb 17, 1970 under 352-324; submitted by E.I. du Pont de Nemours & Co., Inc., Wilmington, Del.; CDL:002972-B)

00023331 Sleight, B.H., III (1973) Acute Toxicity of Simazine to Pink Shrimp (Penaeus duorarum) and Mud Crab (Neopanope texana). (Unpublished study received Apr 25, 1973 under unknown admin. no., prepared by Bionomics, Inc., submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:129174-A)

00023365 Johnston, C.D.; Cronin, M.T.I. (1965) Simazine: Three-Generation Reproduction Study in the Rat. (Unpublished study received Sep 16, 1965 under 5F0447; prepared by Woodard Research Corp., submitted by Geigy Chemical Corp., Ardsley, N.Y.; CDL:090489-B)

00023366 Simoneaux, B.; Sy, A. (1972) Simazine Metabolism in an Aquatic System: Report No. GAAC-72121. (Unpublished study received Dec 13, 1972 under 0F0996; submitted by Geigy Chemical Co., Ardsley, N.Y.; CDL:091715-B)

00023955 Ciba-Geigy Corporation (1977) Chemical Data Section for Simazine. (Unpublished study received Apr 27, 1977 under 100-541; CDL: 229606-A)

00023965 Palazzolo, R.J. (1965) Report to Geigy Chemical Corporation: Acute Toxicity Studies on Simazine 80W. (Unpublished study received Aug 31, 1965 under 100-437; prepared by Industrial Bio-Test Laboratories, Inc., submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:100969-A)

00023992 Larsen, H.; Sutton, D.L.; Eaton, A.R.; et al. (1966) Summary of Residue Studies--Simazine 80W. (Unpublished study received Mar 8, 1966 under 100-437; prepared in cooperation with U.S. Fish and Wildlife Service, Fish Control Laboratory and others, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:101141-A)

00025412 LeBaron, H.M. (1970) Fate of Simazine in the Aquatic Environment: Report No. GAAC-70013. (Unpublished study received May 12, 1970 under 0F0996; submitted by Geigy Chemical Co., Ardsley, N.Y.; CDL:091712-A)

00025413 Flanagan, J.H.; Foster, J.R.; Larsen, H.; et al. (1968) Residue Data for Simazine in Water and Fish. (Unpublished study received May 12, 1970 under 0F0996; prepared in cooperation with Univ. of Maryland and others, submitted by Geigy Chemical Co., Ardsley, N.Y.; CDL:091712-D)

00025433 Gilderhus, P.A. (1969) Some Effects of Long-Term Exposure to Simazine on Goldfish, Bluegills, and Aquatic Invertebrates. (Unpublished study received Mar 12, 1969 under 0F0996; prepared by U.S. Fish and Wildlife Service, Fish Control Laboratory, submitted by Geigy Chemical Corp., New York, N.Y.; CDL:091713-D)

00025438 Beliles, R.P.; Scott, W.; Knott, W. (1965) Simazine: Acute Toxicity in Sunfish. (Unpublished study received Mar 12, 1969 under 0F0996; prepared by Woodard Research Corp., submitted by Geigy Chemical Corp., New York, N.Y.; CDL:091713-K)

00025444 Kahrs, R.A.; Mattson, A.M. (1973) Residues of Simazine in Fish from Ponds Treated with Simazine: Report No. GAAC-73048. (Unpublished study received on unknown date under 0F0996; submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:093305-B)

00026299 Beliles, R.P.; Scott, W.; Knott, W. (1965) Simazine: Acute Toxicity in Goldfish. (Unpublished study received Mar 12, 1969 under 0F0996; prepared by Woodard Research Corp., submitted by Geigy Chemical Corp, New York, N.Y.; CDL:091713-L)

00027134 Talbert, R.E.; Fletchall, O.H. (1965) The adsorption of some s-triazines in soils. Weeds 13(?):46-52. (Also In unpublished submission received Jul 19, 1978 under 201-403; submitted by Shell Chemical Co., Washington, D.C.; CDL:234472-J)

00027856 Gold, B.; Balu, K.; Hofberg, A. (1973) Hydrolysis of Simazine in Aqueous Solution: Report No. GAAC 73044. (Unpublished study received Jul 17, 1978 under 100-541; submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234454-B)

00027857 Keller, A. (1978) Degradation of Simazine (Gesatop(R) in Soil under Aerobic/Anaerobic and Sterile/Aerobic conditions: Project Report 05/78. (Unpublished study received Jul 17, 1978 under 100-541; prepared by Ciba-Geigy Corp., Greensboro, N.C.; CDL: 234454-D)

00027859 Martin, V.; Motko, L.; Gold, B.; et al. (1975) Simazine Residue Tests: AG-A No. 1022. (Unpublished study including AG-A nos. 1154, 1154-III, 1184..., received Jul 17, 1978 under 100-541; prepared in cooperation with Univ. of Missouri and others, submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234454-G)

00027862 Beynon, K.I.; Stoydin, G.; Wright, A.N. (1972) A Comparison of the Breakdown of the Triazine Herbicides Cyanazine, Atrazine, and Simazine in Soils and in Maize. Pesticide Biochemistry and Physiology 2(?):153-161. (Also in unpublished submission received Jul 17, 1978 under 100-541; submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234455-B)

00027881 Walker, A. (1976) Simulation of herbicide persistence in soil. Pesticide Science 7(?):41-49. (Also in unpublished submission received Jul 17, 1978 under 100-541; submitted by Ciba-Geigy Corp., Greensboro, N.C.; CDL:234455-AA)

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APPENDIX II-2

OMB Approval No. 2000-0468 (Expires 12-31-83)

FIFRA SECTION 3(C)(2)(B) SUMMARY SHEET	EPA REGISTRATION NO.
PRODUCT NAME	
APPLICANT'S NAME	DATE GUIDANCE DOCUMENT ISSUED

With respect to the requirement to submit "generic" data imposed by the FIFRA section 3(C)(2)(B) notice contained in the referenced Guidance Document, I am responding in the following manner:

☐ 1. I will submit data in a timely manner to satisfy the following requirements. If the test procedures I will use deviate from (or are not specified in) the Registration Guidelines or the Protocols contained in the Reports of Expert Groups to the Chemicals Group, OECD Chemicals Testing Programme, I enclose the protocols that I will use:

☐ 2. I have entered into an agreement with one or more other registrants under FIFRA section 3(C)(2)(B)(ii) to satisfy the following data requirements. The tests, and any required protocols, will be submitted to EPA by:

NAME OF OTHER REGISTRANT

☐ 3. I enclose a completed "Certification of Attempt to Enter Into an Agreement with Other Registrants for Development of Data" with respect to the following data requirements:

☐ 4. I request that you amend my registration by deleting the following uses (this option is not available to applicants for new products):

☐ 5. I request voluntary cancellation of the registration of this product. (This option is not available to applicants for new products.)

REGISTRANT'S AUTHORIZED REPRESENTATIVE	SIGNATURE	DATE

EPA Form 8580-1 (10-82)

APPENDIX II-3

OMB Approval No. 2000-0468 (Expires: 12-31-83)

CERTIFICATION OF ATTEMPT TO ENTER INTO AN AGREEMENT WITH OTHER REGISTRANTS FOR DEVELOPMENT OF DATA

(To qualify, certify ALL four items)

1. I am duly authorized to represent the following firm(s) who are subject to the requirements of a Notice under FIFRA Section 3(c)(2)(B) contained in a Guidance Document to submit data concerning the active ingredient:	**GUIDANCE DOCUMENT DATE**
	ACTIVE INGREDIENT

NAME OF FIRM	**EPA COMPANY NUMBER**

(This firm or group of firms is referred to below as "my firm".)

2. My firm is willing to develop and submit the data as required by that Notice, if necessary. However, my firm would prefer to enter into an agreement with one or more other registrants to develop jointly, or to share in the cost of developing, the following required items or data:

3. My firm has offered in writing to enter into such an agreement. Copies of the offers are attached. That offer was irrevocable and included an offer to be bound by an arbitration decision under FIFRA Section 3(c)(2)(B)(iii) if final agreement on all terms could not be reached otherwise. This offer was made to the following firm(s) on the following date(s):

NAME OF FIRM	**DATE OF OFFER**

However, none of those firm(s) accepted my offer.

4. My firm requests that EPA not suspend the registration(s) of my firm's product(s), if any of the firms named in paragraph (3) above have agreed to submit the data listed in paragraph (2) above in accordance with the Notice. I understand EPA will promptly inform me whether my firm must submit data to avoid suspension of its registration(s) under FIFRA Section 3(c)(2)(B). (This statement does not apply to applicants for new products.) I give EPA permission to disclose this statement upon request.

TYPED NAME	**SIGNATURE**	**DATE**

EPA Form 8580-6 (10-82)

Appendix III-1

PRODUCT SPECIFIC DATA REPORT

EPA Registration No.______________ Guidance Document for__________________________

Date__________________________

		Test not required for my product listed above (check below)	I am complying with data requirements by		
Registration Guideline No.	Name of Test		Citing MRID#	Submitting Data (Attached)	(For EPA Use Only) Accession Numbers Assigned
§158.20 PRODUCT CHEMISTRY					
61-1	Identity of ingredients				
61-2	Statement of composition				
61-3	Discussion of formation of ingredients				
62-1	Preliminary analysis				
62-2	Certification of limits				
62-3	Analytical methods for enforcement limits				
63-2	Color				
63-3	Physical state				
63-4	Odor				
63-5	Melting point				
63-6	Boiling point				
63-7	Density, bulk-density, or specific gravity				
63-8	Solubility				
63-9	Vapor pressure				
63-10	Dissociation constant				
63-11	Octanol/water partition coefficient				
63-12	pH				
63-13	Stability				
63-14	Oxidizing/reducing reaction				
63-15	Flammability				
63-16	Explodability				
63-17	Storage stability				
63-18	Viscosity				
63-19	Miscibility				
63-20	Corrosion characteristics				
63-21	Dielectric breakdown voltage				
§158.135 TOXICOLOGY					
81-1	Acute oral LD-50, rat				
81-2	Acute dermal LD-50				
81-3	Acute inhalation, LC-50 rat				
81-4	Primary eye irritation, rabbit				
81-5	Primary dermal irritation				
81-6	Dermal sensitization				

APPENDIX IV-2

LABELING REQUIREMENTS OF THE FIFRA, AS AMENDED (REFER TO THE SAMPLE LABELS FOLLOWING)

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
1	Product name	All products	Front panel	Center front panel	
2	Company name and address	All products	None	Bottom front panel or end of label text	If registrant is not the producer, must be qualified by "Packed for . . .," "Distributed by. . .," etc.
3	Net contents	All products	None	Bottom front panel or end of label text	May be in metric units in addition to U.S. units
4	EPA Est. No.	All products	None	Front panel	Must be in similar type size and run parallel to other type.
5	EPA Reg. No.	All products	None	Front panel, immediately before or following Reg. No.	May appear on the container instead of the label.
6A	Ingredients statement	All products	Front panel	Immediately following product name	Text must run parallel with other text on the panel.
6B	Pounds/gallon statement	Liquid products where dosage given as lbs. ai/unit area	Front panel	Directly below the main ingredients statement	
7	Front panel precautionary statements	All products	Front panel		All front panel precautionary statements must be grouped together, preferably blocked.
7A	Keep Out of Reach of Children (Child hazard warning)	All products	Front panel	Above signal word	Note type size requirements.
7B	Signal word	All products	Front panel	Immediately below child hazard warning	Note type size requirements.

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
7C	Skull & crossbones and word POISON (in red)	All products which are Category I based on oral, dermal, or inhalation toxicity	Front panel	Both in close proximity to signal word	
7D	Statement of practical treatment	All products in Categories I, II, and III	Category I: Front panel unless referral statement is used. Others: Grouped with side panel precautionary statements.	Front panel for all.	
7E	Referral statement	All products where precautionary labeling appears on other than front panel.	Front panel		
8	Side/back panel precautionary statements	All products	None	Top or side of back panel preceding directions for use	Must be grouped under the headings in 8A, 8B, and 8C; preferably blocked.
8A	Hazards to humans and domestic animals	All products in Categories I, II, and III	None	Same as above	Must be preceded by appropriate signal word.
8B	Environmental hazards	All products	None	Same as above	Environmental hazards include bee caution where applicable.

APPENDIX IV-2 (continued)

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
8C	Physical or chemical hazards	All pressurized products, others with flash points under 150°F	None	Same as above	
9A	Restricted block	All restricted products	Top center of front panel	Preferably blocked	Includes a statement of the terms of restriction. The words "RESTRICTED USE PESTICIDE" must be same type size as signal word.
9C	Misuse statement	All products	Immediately following statement of classification or ahead of directions for use		
10A	Re-entry statement	All cholinesterase inhibitors	In the directions for use	Immediately after misuse statement	
10C	Storage and disposal block	All products	In the directions for use	Immediately before specific directions for use or at the end of directions for use	Must be set apart and clearly distinguishable from from other directions for use.
10D U.S.	Directions for use	All products	None	None	May be in metric as well as U.S. units

RESTRICTED USE PESTICIDE

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS
(& DOMESTIC ANIMALS)
DANGER (8A)

ENVIRONMENTAL HAZARDS (8B)

PHYSICAL OR CHEMICAL HAZARDS (8C)

DIRECTIONS FOR USE (10D)

It is a violation of Federal law to use this product in a manner inconsistent with its labeling

RE-ENTRY STATEMENT
(If Applicable) (10A)

CATEGORY OF APPLICATOR

STORAGE AND DISPOSAL (10C)

STORAGE

DISPOSAL

CROP:

RESTRICTED USE PESTICIDE (9A)

FOR RETAIL SALE TO AND APPLICATION ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION

PRODUCT NAME ①

ACTIVE INGREDIENT: ________ %
INERT INGREDIENTS: ________ % (6A)
TOTAL: 100.00 %

THIS PRODUCT CONTAINS LBS OF PER GALLON (6B)

KEEP OUT OF REACH OF CHILDREN (7A)

(7B) DANGER — POISON

(7C) ⑦

STATEMENT OF PRACTICAL TREATMENT (7D)

IF SWALLOWED
IF INHALED
IF ON SKIN
IF IN EYES

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

MFG BY ②
TOWN, STATE
ESTABLISHMENT NO. ④
EPA REGISTRATION NO. ⑤
NET CONTENTS ③

CROP:

CROP:

CROP:

CROP:

CROP:

WARRANTY STATEMENT

PHYSICAL-CHEMICAL HAZARDS

Criteria	Required Label Statement
I. Pressurized Containers	
A. Flashpoint at or below 20°F; or if there is a flashback at any valve opening.	Extremely flammable. Contents under pressure. Keep away from fire, sparks, and heated surfaces. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
B. Flashpoint above 20°F and not over 80°F; or if the flame extension is more than 18 inches long at a distance of 6 inches from the valve opening.	Flammable. Contents under pressure. Keep away from heat, sparks, and flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
C. ALL OTHER PRESSURIZED CONTAINERS	Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
II. Non-Pressurized Containers	
A. Flashpoint at or below 20°F.	Extremely flammable. Keep away from fire, sparks, and heated surfaces.
B. Flashpoint above 20°F and over 80°F.	Flammable. Keep away from heat and open flame.
C. Flashpoint over 80°F and not over 150°F.	Do not use or store near heat and open flame.
D. Flashpoint above 150°F.	None required.

STORAGE AND DISPOSAL INSTRUCTIONS FOR PESTICIDES

All products are required to bear specific label instructions about storage and disposal. Storage and disposal instructions must be grouped together in the directions for use portion of the label under the heading STORAGE AND DISPOSAL. Products intended solely for domestic use need not include the heading "STORAGE AND DISPOSAL." The STORAGE AND DISPOSAL heading must appear in the minimum type size listed below:

Size of label front panel in square inches	Required type size for the heading STORAGE AND DISPOSAL (all capitals)
10 and under	6 point
Above 10 to 15	8 point
Above 15 to 30	10 point
Over 30	12 point

Storage and disposal instructions must be set apart and clearly distinguishable from other directions for use. Blocking storage and disposal statements with a solid line is suggested as a means of increasing their prominence.

A. Storage Instructions:

All product labels are required to have appropriate storage instructions. Specific storage instructions are not prescribed. Each registrant must develop his own storage instructions, considering, when applicable, the following factors:

1. Conditions of storage that might alter the composition or usefulness of the pesticide. Examples could be temperature extremes, excessive moisture or humidity, heat, sunlight, friction, or contaminating substances or media.
2. Physical requirements of storage which might adversely affect the container of the product and its ability to continue to function properly. Requirements might include positioning of the container in storage, storage or damage due to stacking, penetration of moisture, and ability to withstand shock or friction.
3. Specifications for handling the pesticide container, including movement of container within the storage area, proper opening and closing procedures (particularly for opened containers), and measures to minimize exposure while opening or closing container.

4. Instructions on what to do if the container is damaged in any way, or if the pesticide is leaking or has been spilled, and precautions to minimize exposure if damage occurs.

5. General precautions concerning locked storage, storage in original container only, and separation of pesticides during storage to prevent cross-contamination of other pesticides, fertilizer, food, and feed.

6. General storage instructions for household products should emphasize storage in original container and placement in locked storage areas.

B. Pesticide Disposal Instructions:

The label of all products, except those intended solely for domestic use, must bear explicit instructions about pesticide disposal. The statements listed below contain the exact wording that must appear on the label of these products:

1. The labels of all products, except domestic use, must contain the statement, "Do not contaminate water, food, or feed by storage or disposal."

2. Except those products intended solely for domestic use, the labels of all products that contain active ingredients appearing on the "Acutely Hazardous" Commercial Pesticide Products List (RCRA "E" List) at the end of this appendix or are assigned to Toxicity Category I on the basis of oral or dermal toxicity, skin or eye irritation potential, or Toxicity Category I or II on the basis of acute inhalation toxicity must bear the following pesticide disposal statement:

   "Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance."

   The labels of all products, except those intended for domestic use, containing active or inert ingredients that appear on the "Toxic" Commercial Pesticide Products List (RCRA "F" List) at the end of this appendix or presently meet any of the criteria in Subpart C, 40 CFR 261 for a hazardous waste must bear the following pesticide disposal statement:

"Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance."

Labels for all other products, except those intended for domestic use, must bear the following pesticide disposal statement:

"Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility."

3. Products intended for domestic use only must bear the following disposal statement: "Securely wrap original container in several layers of newspaper and discard in trash."

C. Container Disposal Instructions

The label of each product must bear container disposal instructions appropriate to the type of container.

1. All products intended for domestic use must bear one of the following container disposal statements:

Container Type	Statement
Non-aerosol products (bottles, cans, jars)	Do not reuse container (bottle, can, jar). Rinse thoroughly before discarding in trash.
Non-aerosol products (bags)	Do not reuse bag. Discard bag in trash.
Aerosol products	Replace cap and discard containers in trash. Do not incinerate or puncture.

2. The labels for all other products must bear container disposal instructions, based on container type, listed below:

Container Type	Statement
Metal containers (non-aerosol)	Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.
Plastic containers	Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.
Glass containers	Triple rinse (or equivalent). Then dispose of in a sanitary landfill or by other approved state and local procedures.

Container Type	Statement
Fiber drums with liners	Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by state and local authorities. If drum is contaminated and cannot be reused[1], dispose of in the same manner.
Paper and plastic bags	Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.
Compressed gas cylinders	Return empty cylinder for reuse (or similar wording).

[1] Manufacturer may replace this phrase with one indicating whether and how fiber drum may be reused.

2. The labels for all other products must bear container disposal instructions, based on container type, listed on the first page of this Appendix.

Pesticides that are hazardous wastes under 40 CFR 261.33(e) and (f) when discarded.

"Acutely Hazardous" Commercial Pesticides (RCRA "E" List)
Active Ingredients, (no inerts):

Acrolein
Aldicarb
Aldrin
Allyl alcohol
Aluminum phosphide
4-Aminopyridine
Arsenic acid
Arsenic pentoxide
Arsenic trioxide
Calcium cyanide
Carbon disulfide
p-Chloroaniline
Cyanides (soluble cyanide salts, not specified elsewere)
Cyanogen chloride
2-Cyclohexyl-4,6-dinitrophenol
Dieldrin
0,0-Diethyl S-[2-ethylthio)ethyl] phosphorodithioate
    (disulfoton, Di-Syston)
0,0-Diethyl 0-pyrazinyl phosphorothioate (Zinophos)
Dimethoate
0,0-Dimethyl 0-p-nitrophenyl phosphorothioate (methyl parathion)
4,6-Dinitro-o-cresol and salts
4,6-Dinitro-o-cyclohexylphenol
2,4 Dinitrophenol
Dinoseb
Endosulfan
Endothall
Endrin
Famphur
Fluoroacetamide
Heptachlor
Hexanethyl tetraphosphate
Hydrocyanic acid
Hydrogen cyanide
Methomyl
alpha-Naphthylthiourea (ANTU)
Nicotine and salts
Octamethylpyrophosphoramide (OMPA, schradan)
Parathion

"Acutely Hazardous" Commercial Pesticides (RCRA "E" List)
Active Ingredients continued:

Phenylmercuric acetate (PMA)
Phorate
Potassium cyanide
Propargyl alcohol
Sodium azide
Sodium cyanide
Sodium fluoroacetate
Strychnine and salts
0,0,0,0-Tetraethyl dithiopyrophosphate (sulfotepp)
Tetraethyl pyrophosphate
Thallium sulfate
Thiofanox
Toxaphene
Warfarin
Zinc phosphide

There are currently no inert ingredients for commercial pesticides on the "Acutely Hazardous" List (RCRA "E" List).

Appendix IV-5
(continued)

"Toxic" Commercial Pesticide Products (RCRA "F" List)
Active Ingredients:

Acetone
Acrylonitrile
Amitrole
Benzene
Bis(2-ethylhexyl)pthalate
Cacodylic acid
Carbon tetrachloride
Chloral (hydrate)
Chlordane (technical)
Chlorobenzene
4-Chloro-m-cresol
Chloroform
o-Chlorophenol
4-Chloro-o-toluidine hydrochloride
Creosote
Cresylic acid
Cyclohexane
Decachlorooctahydro-1,3,4-metheno-2H-cyclobuta[c,d]-pentalen-2-one
(kepone, chlordecone)
1,2-Dibromo-3-chloropropane (DBCP)
Dibutyl phthalate
S-3,3-(Dichloroallyl diisopropylthiocarbamate (diallate, Avadex)
o-Dichlorobenzene
p-Dichlorobenzene
Dichlorodifluoromethane (Freon 12®)
3,5-Dichloro-N-(1,1-dimethyl-2-propynyl) benzamide (pronamide, Kerb)
Dichloro diphenyl dichloroethane (DDD)
Dichloro diphenyl trichloroethane (DDT)
Dichlorethyl ether
2,4-Dichlorophenoxyacetic, esters and salts (2,4-D)
1,2-Dichloropropane
1,3-Dichloropropane (Telone)
Dimethyl phthalate
Ethyl acetate
Ethyl 4,4'-dichlorobenzilate (chlorobenzilate)
Ethylene dibromide (EDB)
Ethylene dichloride
Ethylene oxide
Formaldehyde
Furfural
Hexachlorobenzene
Hexachlorocyclopentadiene
Hexachloroethane
Hydrofluoric acid

Appendix IV-5
(continued)

"Toxic" Commercial Pesticide Products (RCRA "F" List)

Active Ingredients:

Isobutyl alcohol
Lead acetate
Lindane
Maleic hydrazide
Mercury
Methyl alcohol
Methyl bromide
Methyl chloride
2,2'-Methylenebis (3,4,6-trichlorophenol) (hexachlorophene)
Methylene chloride
Methyl ethyl ketone
4-Methyl-2-pentanone (methyl isobutyl ketone)
Naphthalene
Nitrobenzene
p-Nitrophenol
Pentachloroethane
Pentachloronitrobenzene (PCNB)
Pentaclorophenol
Phenol
Phosphorodithioic acid, 0,0-diethyl, methyl ester
Propylene dichloride
Pyridine
Resorcinol
Safrole
Selenium disulfide
Silvex
1,2,4,5-Tetrachlorobenzene
1,1,2,2-Tetrachloroethane
Tetrachloroethylene
2,3,4,6-Tetrachlorophenol
Thiram
Toluene
1,1,1-Trichloroethane
Trichloroethylene
Trichloromonofluoromethane (Freon 11®)
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)
Xylene

Appendix IV-5
(continued)

"Toxic" Commercial Pesticide Products (RCRA "F" List)
Inert Ingredients:

- Acetone
- Acetonitrile
- Acetophenone
- Acrylic acid
- Aniline
- Benzene
- Chlorobenzene
- Chloroform
- Cyclohexane
- Cyclohexanone
- Dichlorodifluoromethane (Freon 12®)
- Diethyl phthalate
- Dimethylamine
- Dimethyl phthalate
- 1,4-Dioxane
- Ethylene oxide
- Formaldehyde
- Formic acid
- Isobutyl alcohol
- Meleic anhydride
- Methyl alcohol (methanol)
- Methyl ethyl ketone
- Methyl methacrylate
- Naphthalene
- Saccharin and salts
- Thiourea
- Toluene
- 1,1,1-Trichloroethane
- 1,1,2-Trichloroethane
- Trichlorofluoromethane (Freon 11®)
- Vinyl chloride
- Xylene

ATTACHMENT A

PRODUCTS AFFECTED BY THIS REREGISTRATION PROCESS (SIMAZINE)

Following is a list of your products affected by this reregistration process. If this list is incomplete or inaccurate in any way, please notify the Product Manager (PM) identified in the letter.

ATTACHMENT B

REGISTRANTS WITH PESTICIDE PRODUCTS CONTAINING THE ACTIVE INGREDIENT SIMAZINE

The information attached will allow registrants with pesticide products containing the above ingredient to contact one another regarding joint data development or sharing the cost of data development under section 3(c)(2)(B) of FIFRA. This information includes the following: EPA Reg. No., company name, company address, active ingredient, percentage of active ingredient and type of formulation, such as Manufacturing-Use Product (MP), Technical Product (TP), Wettable Powder (WP), and Emulsifiable Concentrate (EC).